Project No. 1251-100
Crude Oil Tank Farms Project, Agrood Area 30 (Module-1)

ETROJET Enppi EGPC

System ID	**030-EL-008**
System Description	**Substation Power Distrbution Panels System**

Sr.	Pre-Commissioning and Commissioning Dossier Index	Applicable (Yes/No)
1	**Mechanical Completion Certificate (MCC)**	
2	**Ready for Startup Certificate (RFSU)**	
3	**System Punch Lists**	
4	**System Limits Marked Up P&ID**	
5	**System Index**	
6	**Piping Pre-Commissioning**	
	6.01) Piping Test Packs	
	6.02) Piping Pre-commissioning Check Lists	
7	**Piping Commissioning**	
	7.01) Service Test, GLT, CLT and N2 Purging Certificates	
	7.02) Piping Commissioning Check Lists	

Sr.	Pre-Commissioning and Commissioning Dossier Index	Applicable (Yes/No)
8	**Mechanical Pre-Commissioning**	
	8.01) System Mechanical Index	
	8.02) Equipment Drawings	
	8.03) Equipment Datasheets	
	8.04) Boxing-up Certificates	

	8.05) Grouting Certificates	
	8.06) Pre-Alignment Certificates	
	8.07) Mechanical Pre-Commissioning Checklists	
9	**Mechanical Commissioning**	
	9.01) Final Alignment Certificates	
	9.02) Motor Solo Run Certificates	
	9.03) Mechanical Run Test (MRT) Certificates	
	9.04) Mechanical Commissioning Checklists	
	9.05) Mechanical Supplier Check Lists & Reports	
10	**Instrumentation Pre-Commissioning**	
	10.01) System Instrument Index	
	10.02) Instrument Data Sheets	
	10.03) Instrument Cable Schedule	
	10.04) System Instrumentation Wiring Diagram	
	10.05) Hook-up Drawing (Mechanical & Pneumatic)	
	10.06) Instruments Cables Schedule	
	10.07) Instruments Cables Laying Certificates	
	10.08) Instruments Cables Termination Certificates	
	10.09) Instruments Cables Testing Certificates	
	10.10) Instruments Calibration Certificates	
	10.11) Instrument Loop Checks Certificates	
	10.12) Instrumentation Pre-Commissioning Check Lists	
	10.13) Instrumentation Supplier Check Lists & Reports	
11	**Instrumentation Commissioning**	
	11.01) Instrumentation Function Test Certificates	
	11.02) Instrumentation Supplier Check Lists & Reports	
Sr.	**Pre-Commissioning and Commissioning Dossier Index**	**Applicable (Yes/No)**
12	**Electrical Pre-Commissioning**	
	12.01) System Electrical Index	
	12.02) Electrical Drawings	
	12.03) Motor Datasheets	
	12.04) Electrical Cables Schedule	
	12.05) Electrical Cables Laying Certificates	
	12.06) Electrical Cables Testing Certificates	
	12.07) Electrical Cables Termination Certificates	
	12.08) FAT Reports & Certificates	
	12.09) SAT Reports & Certificates	
	12.10) Electrical Pre-Commissioning Check Lists	
	12.11) Electrical Supplier Check Lists & Reports	

13	**Electrical Commissioning**	
	13.01) Electrical -Commissioning Check Lists	
	13.02) Electrical Supplier Check Lists & Reports	
14	**Red Marked-up Drawings**	
	14.01) P&ID	
	14.02) Instrumentation Drawings	
	14.03) Electrical Drawings	

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

Pre-commissioning and Commissioning Dossier Content:

Section	Description	Status
1-	Mechanical Completion Certificate (MCC) Ready For Start-up (RFSU)	
2-	System Punch Lists	
3-	System Limits Marked Up	
4-	FAT Test Report & Certificates	
5-	System Index.	
6.A-	Electrical Pre-commissioning	
	6.A.1 General Arrangement and Wiring Diagrams	
	6.A.2 Single line Diagram	
	6.A.3 Electrical Panel Schedule	
	6.A.4 Electrical Cable Schedule	
	6.A.5 Pre-Commissioning Check List	
6.B-	Electrical Commissioning	
	6.B.1 Commissioning Check List	
7-	Red Mark-Up Drawings (If Any)	

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

1-Mechanical Completion Certificate (MCC)

Enppi

SYSTEM MECHANICAL COMPLETION CERTIFICATE (MCC)

PROJECT TITLE	:	CRUDE OIL TANK FARM(AGROOD AREA
PROJECT No	:	1251-100
SYSTEM NAME	:	Substation Power Distribution Panels System
SYSTEM ID	:	030-EL-008

THIS IS TO CERTIFY THAT:

- **THE ABOVE SYSTEM HAS BEEN FABRICATED, ERECTED, INSTALLED AND TESTED TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS, SPECIFICATIONS, THE APPLICABLE CODES AND STANDARDS.**
- **ALL PRE-COMMISSIONING RELEVANT ACTIVITIES, TESTS, INSPECTIONS AND CHECKS HAVE BEEN CARRIED OUT FOR THIS SYSTEM AND FOUND ACCEPTABLE.**
- **Q/C DOCUMENTATION OF THE ABOVE SYSTEM HAS BEEN AUDITED BY THE CUSTOMER SITE QUALITY CONTROL AND FOUND COMPLETED.**
- **ALL PUNCH LIST ITEMS CATEGORY (A) IN THIS SUBSYSTEM WERE CLEARED.**
- **THIS SYTEM IS MECHANICALLY COMPLETED ON THE DATE** 20/6/2021 **AND READY FOR COMMISSIONING (RFC) WITH THE FOLLOWING EXCEPTIONS.**

EXCEPTIONS :

NOTE: ACCEPTANCE OF THE ABOVE SYSTEM DOES NOT RELIEVE ENPPI/CONSTRUCTION CONTRACTOR FROM THEIR CONTRACTUAL OBLIGATIONS AND RESPONSIBILITIES.

COMPANY	**PETROJET**	**ENPPI**	**PPC**
NAME		Mohamed Abbas	
TITLE		Site Mgt	
SIGNATURE			
DATE			

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

2- Ready for Startup Certificate (RFSU)

ETROJET Enppi EGPC

READY FOR START UP CERTIFICATE

PROJECT TITLE	:	**EGPC CRUDE OIL TANK FARMS PROJECT (AGROOD-02)**
PROJECT No.	:	**1251-100**
SYSTEM /AREA /PLANT	:	**Substation Power Distrbution Panels System**
SYSTEM /AREA /PLANT No.	:	**030-EL-008**

THIS IS TO CERTIFY THAT:

- **THE MENTIONED SYSTEM /AREA /PLANT IS READY FOR START UP WHERE ALL MECHANICAL WORKS, PRECOMMISSIONING AND COMMISSIONING ACTIVITIES HAVE BEEN SUCCESSFULLY COMPLETED.**
- **MECHANICAL COMPLETION CERTIFICATE(S) FOR THE MENTIONED SYSTEM / AREA / PLANT HAVE BEEN SIGNED.**
- **ISSUANCE OF THIS READY FOR START UP CERTIFICATE(S) SHALL NOT RELIEVE CONTRACTOR(S) FROM THEIR OBLIGATIONS TO COMPLETE THE REMAINING SYSTEMS NOR FROM THEIR WARRANTY OBLIGATIONS AND OTHER PROVISIONS OF THE CONTRACT.**
- **THE FOLLOWING EXCEPTIONS AGREED TO BE CLEARED AFTER START UP AND WILL NOT PREVENT START UP ACTIVITIES.**

EXCEPTIONS :

COMPANY	**CONSORTIUM**	**PPC**
NAME	Ahmed El Shafie	Mahmoud Ibrahim
TITLE	Commissioning Manager	Elec. eng.
SIGNATURE		
DATE	30-6-2021	4-7-2021

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

3- System Punch Lists

PETROJET | Enppi | **PUNCH LIST** | EGPC

PROJECT TITLE : CRUDE OIL TANK FARM PROJECT (AGROOD AREA)

PROJECT NUMBER : 01251-100	**DISCIPLINE:UTILITIES**
SYSTEM NAME: Substation Power Distrbution Panels System	**SYSTEM ID:** 030-EL-008
SUB-SYSTEM NAME:	**SUB-SYSTEM ID:**

NO	DESCRIPTION	CAT	ACTION BY	DISP	CLEARANCE APPROVED BY
1.	Cables (p1-030-MovDp-1)(p2-030-Mov-Dp.1)				
	to be terminated and tested	A	PTJ	ELE	
2-	MOV panel to be installed	A	PTJ	E/E	

CAT: CATEGORY(A,B,C) ,ACTION BY: (ENPPI,CONST.CONTRACTOR,SUPPLIER.....) , DISP: DESCIPLINE(PIP,MECH,ELECT,INST.....)

COMPANY	PTJ	ENPPI	PMC
NAME	Sobhy Seleem	Nader	
SIGN.			
DATE	6-4-2021		

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

4- System Limits Marked Up P&ID

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

5- System Index

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

6- Piping Pre-Commissioning

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

6.01- Piping Test Packs

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

6.02- Piping Pre-commissioning Check Lists

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

7- Piping Commissioning

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

7.01- Service Test, GLT, CLT and N2 Purging Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

7.02- Piping Commissioning Check Lists

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

8- Mechanical Pre-Commissioning

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

8.01- System Mechanical Index

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

8.02- Equipment Drawings

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

8.03- Equipment Datasheets

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

8.04- Boxing-up Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

8.05- Grouting Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

8.06- Pre-Alignment Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

8.07- Mechanical Pre-Commissioning Checklists

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

9- Mechanical Commissioning

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

9.01- Final Alignment Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

9.02- Motor Solo Run Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

9.03- Mechanical Run Test (MRT) Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

9.04- Mechanical Commissioning Checklists

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

9.05- Mechanical Supplier Check Lists & Reports

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10- Instrumentation Pre-Commissioning

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10.01- System Instrument Index

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10.02- Instrument Data Sheets

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10.03- Instrument Cable Schedule

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10.04- System Instrumentation Wiring Diagram

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10.05- Hook-up Drawing (Mechanical & Pneumatic)

Project: 01251-100
CRUDE OIL TANK FARM PROJECT (AGROOD AREA)

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10.06- Instruments Cables Schedule

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10.07- Instruments Cables Laying Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10.08- Instruments Cables Termination Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10.09- Instruments Cables Testing Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10.10- Instruments Calibration Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10.11- Instrument Loop Checks Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10.12- Instrumentation Pre-Commissioning Check Lists

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

10.13- Instrumentation Supplier Check Lists & Reports

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

11- Instrumentation Commissioning

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

11.01- Instrumentation Function Test Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

11.02- Instrumentation Supplier Check Lists & Reports

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

12- Electrical Pre-Commissioning

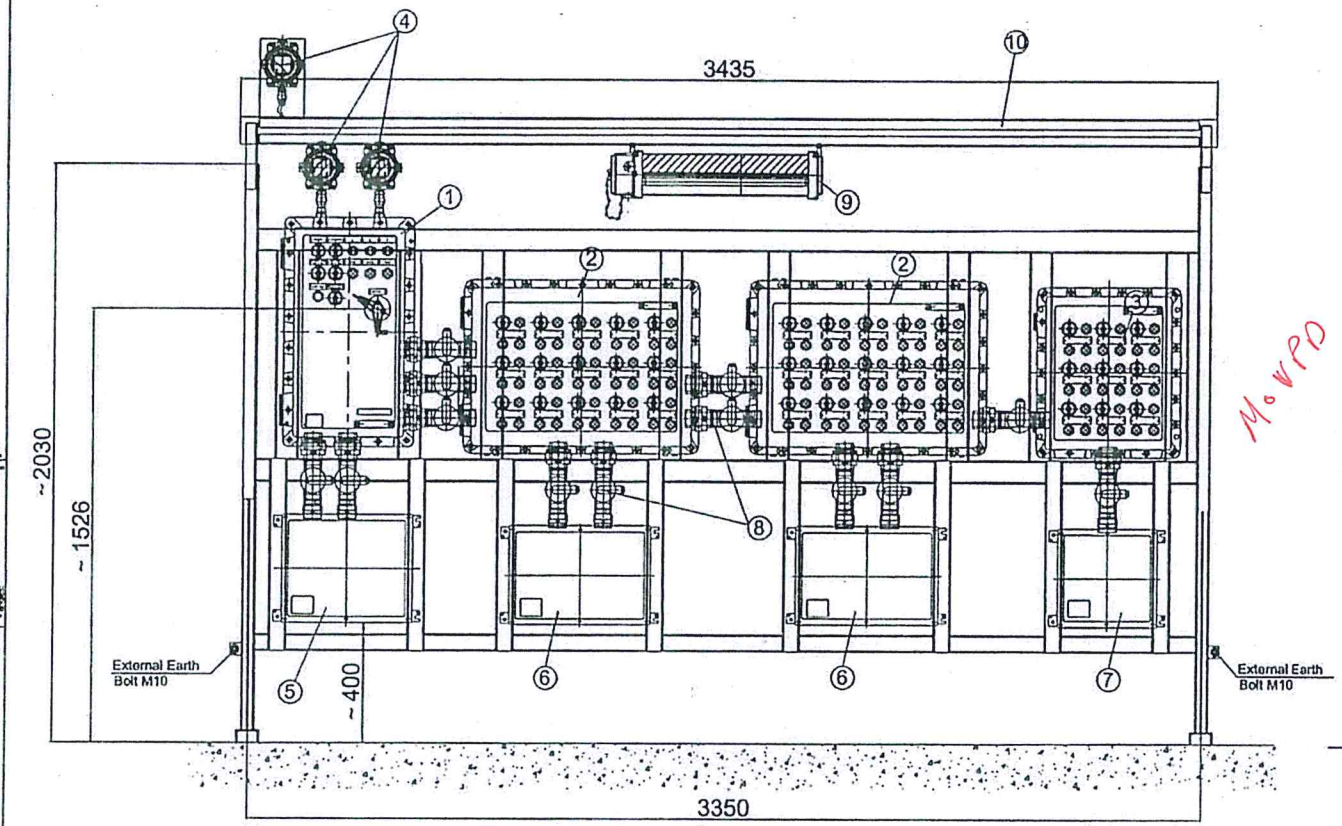
System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

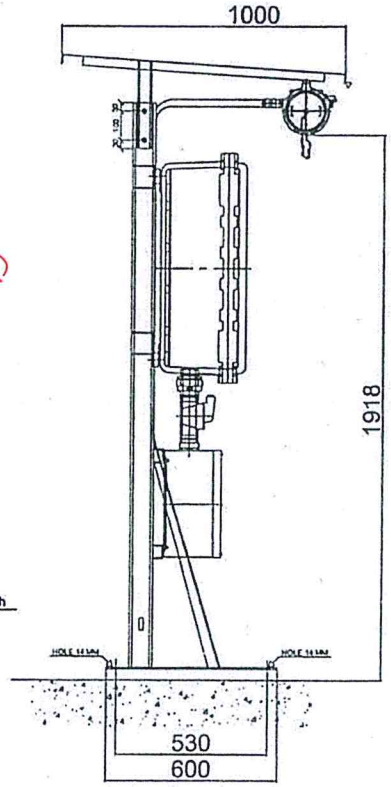
12.01- System Electrical Index

030-EL-008	Substation Power Distrbution Panels System	Electrical	030-SUB-ASP - 1	Power Distrbution Panel	Checklist	EL-13 A /EL-30 A
030-EL-008	Substation Power Distrbution Panels System	Electrical	030-SUB-UPDP-1	Power Distrbution Panel	Checklist	EL-13 A /EL-30 A
030-EL-008	Substation Power Distrbution Panels System	Electrical	P-030-SUB-ASP-1	LV Cable	Checklist	EL-31 A
030-EL-008	Substation Power Distrbution Panels System	Electrical	P-030-SUB-UPDP-1	LV Cable	Checklist	EL-31 A
030-EL-008	Substation Power Distrbution Panels System	Electrical	P1-030-MOVDP-1	LV Cable	Checklist	EL-31 A
030-EL-008	Substation Power Distrbution Panels System	Electrical	P2-030-MOVDP-1	LV Cable	Checklist	EL-31 A

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

12.02- Electrical Drawings





MoVPD

ITEM	DESCRIPTION	Q.TY	NOTE/MAT.	MANUFACTURER
10	HDG Steel Mounting frame + canopy (unpainted)	1	ECR 3	TECHNOR-ITALSMEA
9	LED Tube Lighting fixture 2x18W	1	EVF-P LED	TECHNOR-ITALSMEA
8	Set of Three pieces union 2"NPT and Horizontal sealing fittings	13	BMM-8+EZS-8 NP-8 + AB36N	TECHNOR-ITALSMEA
7	AISI316L ENCLOSURE	1	SB-353516	TECHNOR-ITALSMEA
6	AISI316L ENCLOSURE	2	SB-355016	TECHNOR-ITALSMEA
5	AISI316L ENCLOSURE	1	SB-384520	TECHNOR-ITALSMEA
4	ALUMINIUM ENCLOSURE	1	CPC-26/EMH90	TECHNOR-ITALSMEA
3	ALUMINIUM ENCLOSURE	1	EJB-9	TECHNOR-ITALSMEA
2	ALUMINIUM ENCLOSURE	2	EJB-13	TECHNOR-ITALSMEA
1	ALUMINIUM ENCLOSURE	1	EJB-12	TECHNOR-ITALSMEA

NOTE:

- TECHNOR-ITALSMEA WILL SUPPLY THE STRUCTURE WITH ALL ENCLOSURES MOUNTED AND WIRED.
- CANOPY WILL BE SHIPPED SEPARATLY UNASSEMBLED
- SEALING OF JOINTS BETWEEN ENCLOSURES SHALL BE COMPLETED BY CLIENT BEFORE COMMISSIONING AT SITE

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

Technor ITALSMEA
A company of MARECHAL ELECTRIC GROUP

Project	EGPC CRUDE OIL TANK FARM
Description	. . .
CLIENT	ENPPI
P.O. n°	1251-100-520-01-25
H.R. n°	01251-100-520-01-Q
Dwg. No.	B050X12221746
Drawn.	Vaccalluzzo
Check.	Matassa
App.	Roncoroni
Date	20/03/2020
Scale	/
Rev.	0
S.O.	E-2000253
sh.	2
of	14

C:\USERS\GVACCALUZZO\DESKTOP\MGROOD.DWG

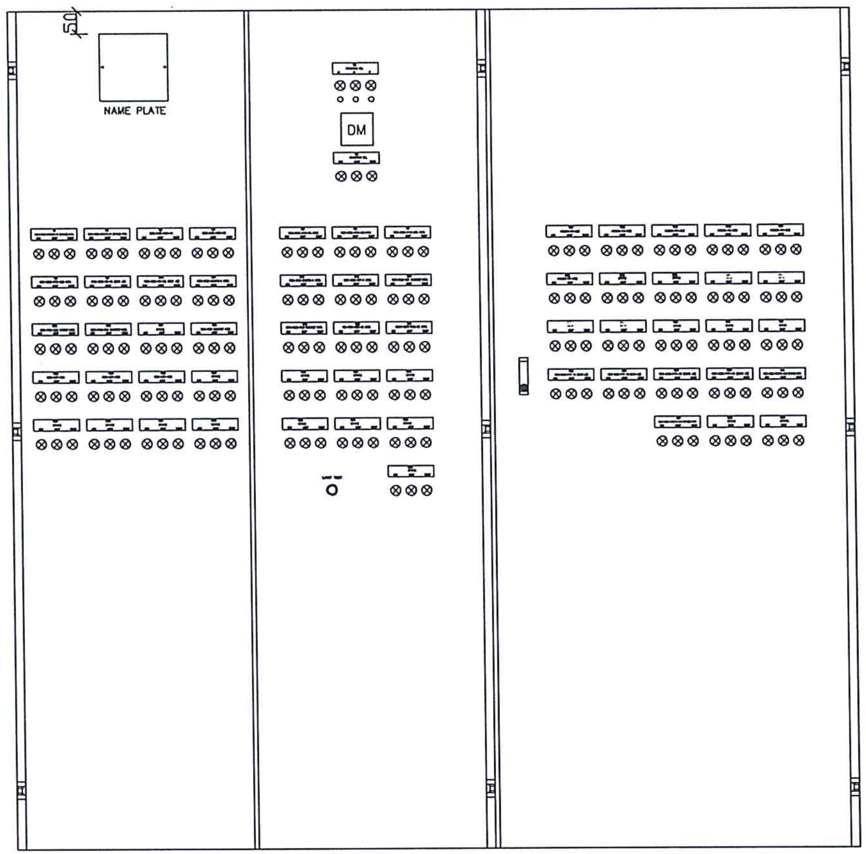
UNI A3 (297x420mm)

General Note:
Except otherwise writing, all the quotas are expressed in millimeters with the following tolerances:
- up to 6mm: ± 0.2mm
- over 6 and up to 30mm: ± 0.5mm
- over 30 and up to 100mm: ± 0.8mm
- over 100 and up to 300mm: ± 1.2mm
- over 300 and up to 1000mm: ± 2mm
- over 1000mm: ± 2mm
- angles: ± 1°

Note for Drilling stage:
Except where indicated:
- All isometric holes will be perpendicular to the side where they are realized
- For all standard components refer to the typical drilling drawings: LAV.MEC_STD-01, LAV.MEC_STD-02, LAV.MEC_STD-03

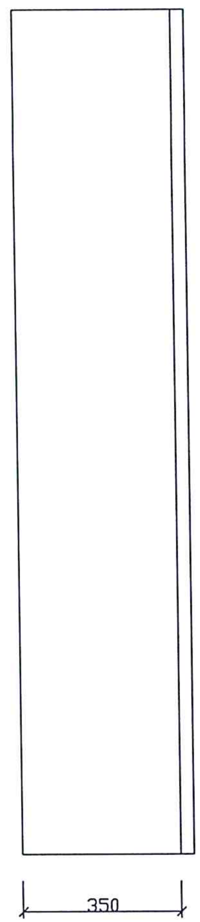
Se non diversamente indicato:
- I fori metrici saranno perpendicolari alle pareti dove realizzati
- Per i componenti standard fare riferimento ai tipici di foratura : LAV.MEC_STD-01, LAV.MEC_STD-02, LAV.MEC_STD-03

1	2	3	4	5	6	7	8	9

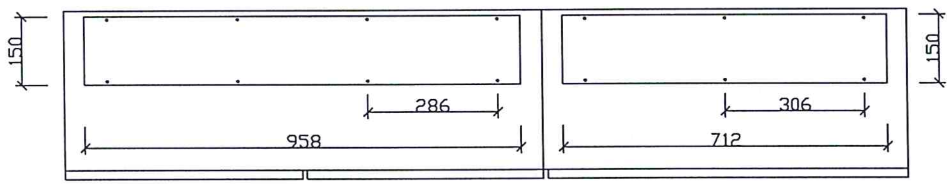


FRONT VIEW WITH DOORS

ASP



SIDE VIEW



TOP AND BOTTOM VIEW WITH GLAND PLATE

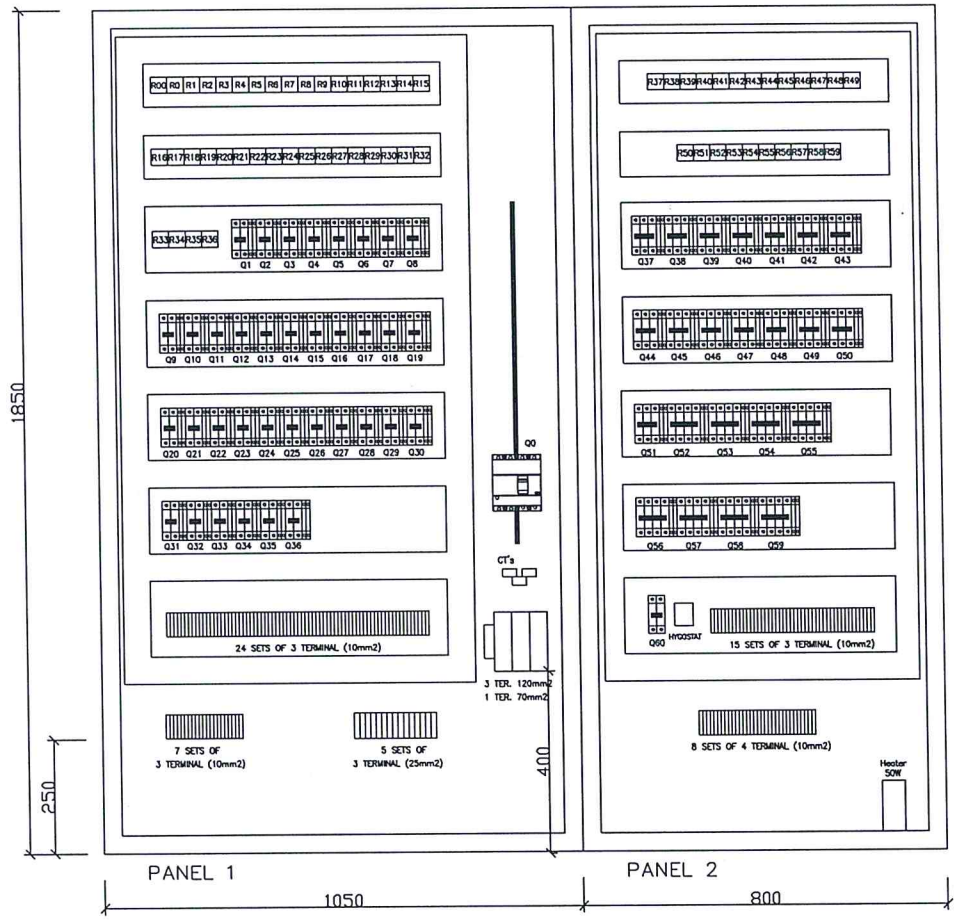
V:\JOB\2020_IN CORSO\E\E2000251 A E2000500\E2000253 - ENPPI - AGROCO\04 - SVILUPPO\01 - DISEGNI\QUADRI STAGNI\REV.3\ASP_REV 3\B01-0042_ASP.DWG

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

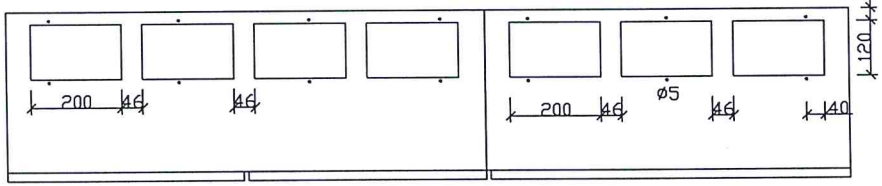
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

Project: EGPC CRUDE OIL TANK FARM	CLIENT: ENPPI	Dwg. No. B050X12221726	
Description: SUBSTATION AUXILIARY SERVICE PANEL	P.O. n° 1251-100-520-01-25	Drawn. Badr	Check Vaccalluzzo
	M.R. n° 01251-100-520-01-P	App. Roncoroni	Date 19/07/2020
		Scale N/A	Rev. 03 S.O. E-2000253

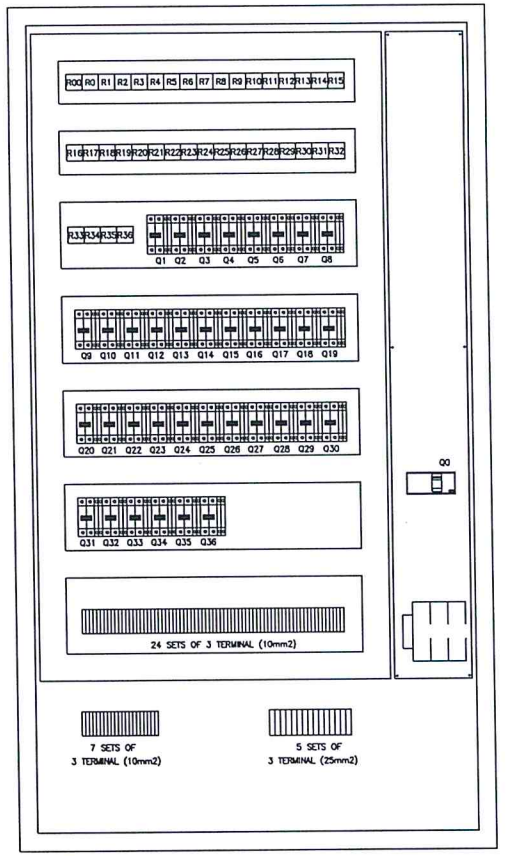
UNI A3 (297x42



FRONT VIEW WITHOUT DOORS, WITHOUT MIRROR FOR BB



TOP AND BOTTOM VIEW WITHOUT GLAND PLATE



PANEL 1 FRONT VIEW WITHOUT DOORS AND WITH MIRROR FOR B.B

Explosion Proof Electrical Equipment
Materiali Elettrici Antideflagranti

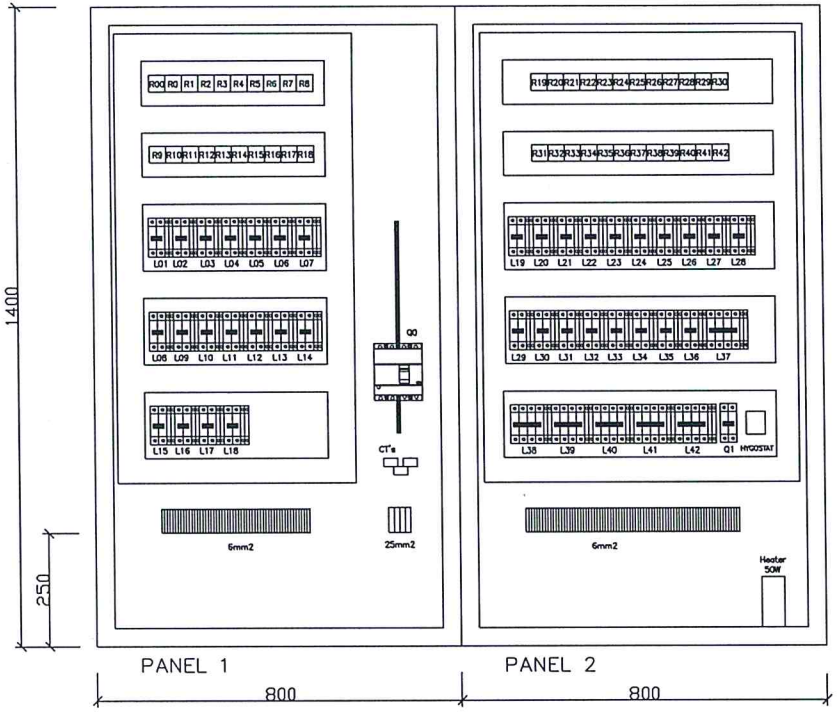
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

Project: EGPC CRUDE OIL TANK FARM	CLIENT: ENPPI
Description: SUBSTATION AUXILIARY SERVICE PANEL	P.O. n°: 1251-100-520-01-25
	M.R. n°: 01251-100-520-01-P

Dwg. No. B050X12221726

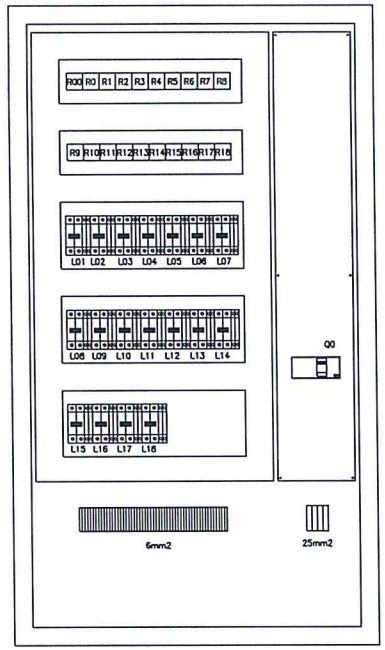
Drawn. Badr	Check Vaccalluzzo		
App. Roncoroni	Date 19/07/2020		
Scale N/A	Rev. 03	S.O. E-2000253	

UNI A3 (297x42

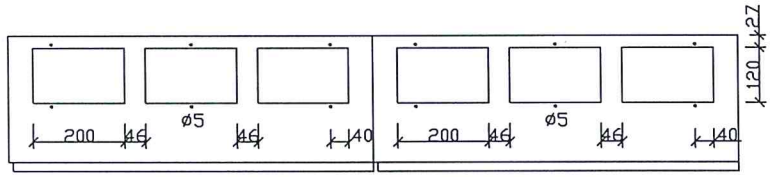


FRONT VIEW WITHOUT DOORS, WITHOUT MIRROR FOR BB

UPDP



PANEL 1 FRONT VIEW WITHOUT DOORS
AND WITH MIRROR FOR B.B



TOP AND BOTTOM VIEW WITHOUT GLAND PLATE

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

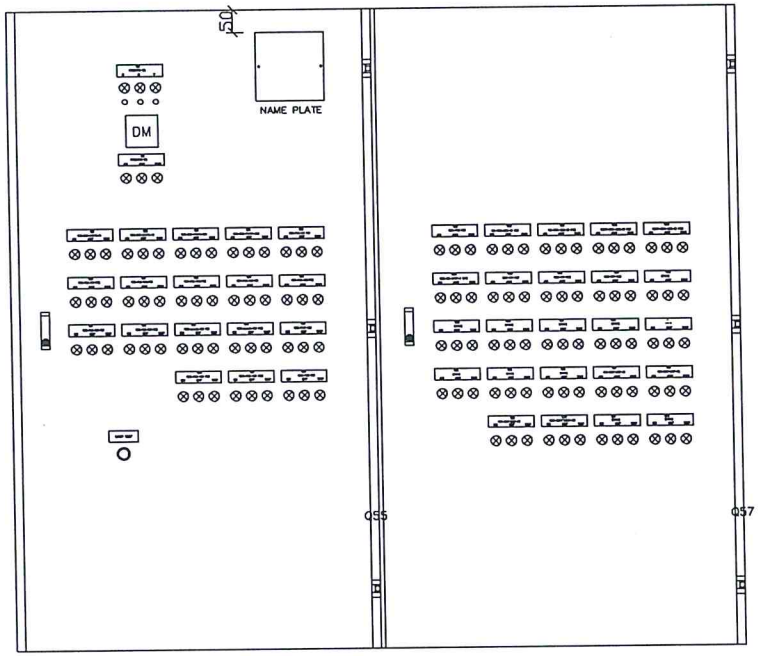
TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

Project: EGPC CRUDE OIL TANK FARM	CLIENT: ENPPI	Dwg. No.: B050X12221727	
Description: SUBSTATION AC-UPS DISTRIBUTION PANEL	P.O. n°: 1251-100-520-01-25	Drawn: Badr	Check: Vaccalluzzo
	M.R. n°: 01251-100-520-01-P	App.: Roncoroni	Date: 19/07/2020
		Scale: N/A	Rev.: 3 S.O.: E-2000253

UNI A3 (297x42

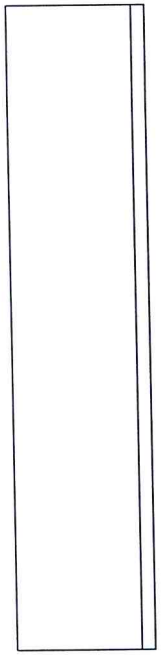
Note for Drilling stands:
Holes where indicated:
- All isometric holes will be perpendicular to the side where they are realized
- For all standard components refer to the typical drilling drawings:
  LM/MEC_STD/01, LM/MEC_STD/02, LM/MEC_STD/03
  Se non diversamente indicato:
- For all standard components refer to the typical drilling drawings:
  LM/MEC_STD/01, LM/MEC_STD/02, LM/MEC_STD/03
  I fori metrici saranno perpendicolari alle pareti dove realizzati
- I fori metrici saranno perpendicolari alle pareti dove realizzati
  Per componenti standard fare riferimento ai disegni tipici:
  LM/MEC_STD/01, LM/MEC_STD/02, LM/MEC_STD/03

General Notes:
Except otherwise writing, all the quotas are expressed in millimeters
with the following tolerances:
- up to 6mm: ± 0.2mm
- over 6 and up to 30mm: ± 0.5mm
- over 30 and up to 100mm: ± 0.8mm
- over 100 and up to 300mm: ± 1.2mm
- over 300 and up to 1000mm: ± 2mm
- over 1000mm: ± 3mm
- angles: ± 1°

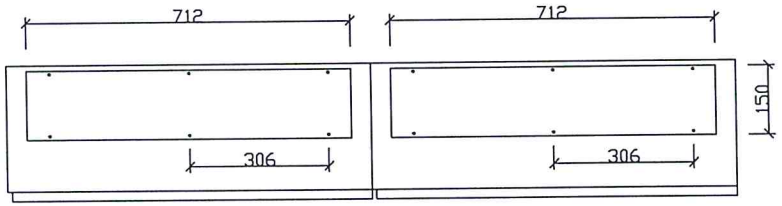


FRONT VIEW WITH DOORS

UPPP



SIDE VIEW



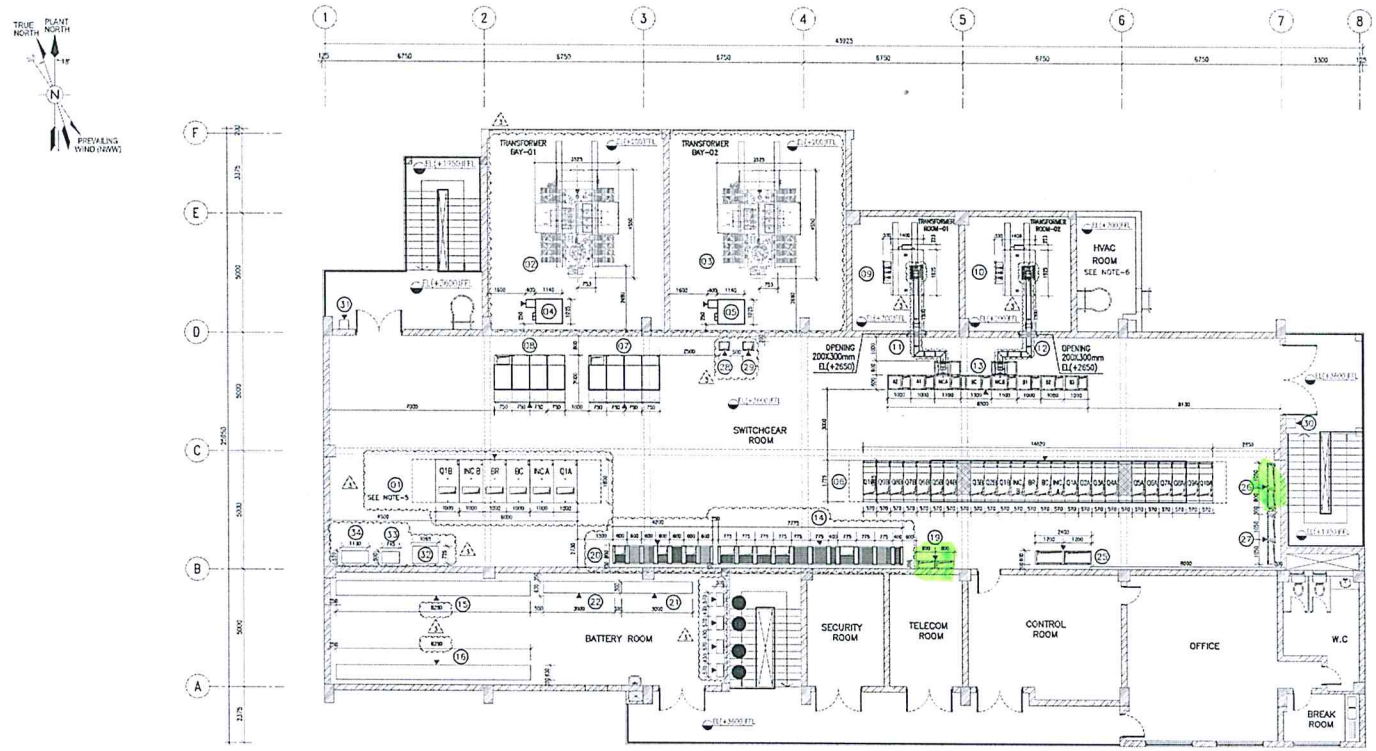
TOP AND BOTTOM VIEW WITH GLAND PLATE

Explosion Proof
Electrical Equipment
Materiali Elettrici Antideflagranti

TECHNOR ITALSMEA
A COMPANY OF MARECHAL ELECTRIC

Project: EGPC CRUDE OIL TANK FARM	CLIENT: ENPPI	Dwg. No.: B050X12221727	
Description: SUBSTATION AC-UPS DISTRIBUTION PANEL	P.O. n°: 1251-100-520-01-25	Drawn: Badr	Check: Vaccalluzzo
	M.R. n°: 01251-100-520-01-P	App.: Roncoroni	Date: 19/07/2020
		Scale: N/A	Rev.: 3 — S.O.: E-2000253

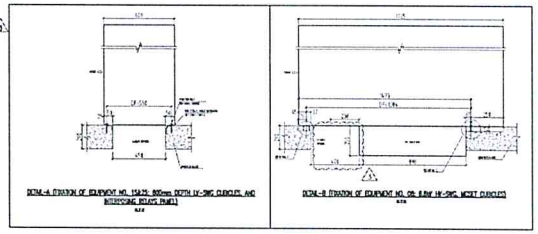
UNI A3 (297x4

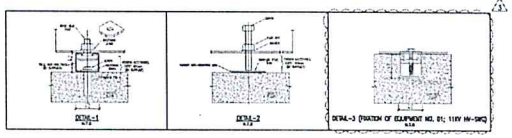


ELECTRICAL EQUIPMENT LIST

EQUIPMENT NO.	EQUIPMENT TAG	DESCRIPTION	FIXATION
01	030-SUB-HVSWG-11	11KV, 1250A AIR INSULATED SWITCHGEAR	FLOOR
02	030-SUB-PTR-1A	11/6.6KV, 8MVA OIL POWER TRANSFORMER	FLOOR
03	030-SUB-PTR-1B	11/6.6KV, 8MVA OIL POWER TRANSFORMER	FLOOR
04	030-SUB-NER-1A	6.6/√3KV, 200A/10SEC NEUTRAL EARTHING RESISTOR	FLOOR
05	030-SUB-NER-1B	6.6/√3KV, 200A/10SEC NEUTRAL EARTHING RESISTOR	FLOOR
06	030-SUB-MVSWG-6.6	6.6KV, 1250A AIR INSULATED SWITCHGEAR	FLOOR
07	030-SUB-PFC-1A	6.6KV, 2400KVAR POWER FACTOR CORRECTION	FLOOR
08	030-SUB-PFC-1B	6.6KV, 2400KVAR POWER FACTOR CORRECTION	FLOOR
09	030-SUB-TR-1A	6.6/0.4KV, 1000KVA DRY-TYPE DISTRIBUTION TRANSFORMER	FLOOR
10	030-SUB-TR-1B	6.6/0.4KV, 1000KVA DRY-TYPE DISTRIBUTION TRANSFORMER	FLOOR
11	030-SUB-LVBD-1A	0.4KV, 2000A LOW VOLTAGE BUS DUCT	----
12	030-SUB-LVBD-1B	0.4KV, 2000A LOW VOLTAGE BUS DUCT	----
13	030-SUB-LVSWG-1	0.4KV, 2000A AIR INSULATED SWITCHGEAR	FLOOR
14	030-SUB-ACUPS-1	400VAC, 50KVA AC UNINTERRUPTED POWER SUPPLY	FLOOR
15	030-SUB-ACUPS-1-BATT-A	BATTERY RACK-A FOR AC UPS	FLOOR
16	030-SUB-ACUPS-1-BATT-B	BATTERY RACK-B FOR AC UPS	FLOOR
17	030-SUB-ACUPS-CB-A	BATTERY RACK-A CIRCUIT BREAKER BOX FOR AC UPS	WALL
18	030-SUB-ACUPS-CB-B	BATTERY RACK-B CIRCUIT BREAKER BOX FOR AC UPS	WALL

EQUIPMENT NO.	EQUIPMENT TAG	DESCRIPTION	FIXATION
19	030-SUB-UPDP-1	UPS POWER DISTRIBUTION PANEL	WALL
20	030-SUB-DCUPS-1	110VDC, 75A DC UNINTERRUPTED POWER SUPPLY	FLOOR
21	030-SUB-DCUPS-1-BATT-A	BATTERY RACK-A FOR DC UPS	FLOOR
22	030-SUB-DCUPS-1-BATT-B	BATTERY RACK-B FOR DC UPS	FLOOR
23	030-SUB-DCUPS-CB-A	BATTERY RACK-A CIRCUIT BREAKER BOX FORDC UPS	WALL
24	030-SUB-DCUPS-CB-B	BATTERY RACK-B CIRCUIT BREAKER BOX FOR DC UPS	WALL
25	030-SUB-IRP-1	INTERPOSING RELAY PANEL	FLOOR
26	030-SUB-ASP-1	AUXILARY SERVICE PANEL	FLOOR
27	030-SUB-LPDP-1	INDOOR LIGHTING AND SMALL POWER DISTRIBUTION PANEL	FLOOR
28	030-SUB-AVR-1A	AVR PANEL FOR ON-LOAD TAP CHANGER OF 030-SUB-PTR-1A	WALL
29	030-SUB-AVR-1B	AVR PANEL FOR ON-LOAD TAP CHANGER OF 030-SUB-PTR-1B	WALL
30	030-SUB-EPS-1	SUBSTATION EMERGENCY PUSH BUTTON	WALL
31	030-SUB-EPS-2	SUBSTATION EMERGENCY PUSH BUTTON	WALL
32	------	6.6kV HV SWG LIFTING TRUCK	----
33	------	6.6kV HV SWG EARTHING TRUCK	----
34	------	LV SWG LIFTING TRUCK	----





REFERENCE DRAWING AND DOCUMENTS

01251-100-030-KPP-002	AGROOD AREA (MODULE-1) PLOT PLAN
01251-100-030-AEL-001	AGROOD AREA (MODULE-1) MASTER EQUIPMENT LIST
01251-100-030-C1D-221	SUBSTATION CELLAR FLOOR PLAN
01251-100-030-C1D-222	SUBSTATION FIRST FLOOR PLAN
01251-100-030-KEE-001	AGROOD AREA (MODULE-1) GENERAL ELECTRICAL SINGLE LINE DIAGRAM
01251-100-000-KEE-002	ELECTRICAL SINGLE LINE DIAGRAM 6.6kV HIGH VOLTAGE MOTOR CONTROL CENTER
01251-100-000-KEE-003	ELECTRICAL SINGLE LINE DIAGRAM LOW VOLTAGE MOTOR CONTROL CENTER
01251-100-000-ED8-001	ELECTRICAL DESIGN BASIS

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL ELEVATIONS ARE IN MILLIMETERS.
3. THIS DRAWING IS CONCERNED ONLY WITH SUBSTATION ELECTRICAL EQUIPMENT.
4. ALL EQUIPMENT SHALL BE BOTTOM ENTRY UNLESS OTHERWISE INDICATED.
5. EQUIPMENT NO.1 SHALL BE SUPPLIED AND INSTALLED BY EGPC/CANAL ELECTRICAL DISTRIBUTION COMPANY.
6. ELECTRICAL EQUIPMENTS INSIDE HVAC ROOM (HVAC MCC & LCP) SHALL BE SUPPLIED AND INSTALLED BY PETROJET.

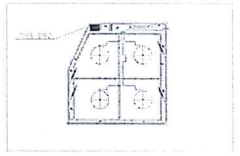
LEGEND

ELECTRICAL EQUIPMENT
FUTURE ELECTRICAL EQUIPMENT
GLAND PLATE
EQUIPMENT FRONT
EQUIPMENT NUMBER
DUMMY PANEL

ABBREVIATIONS

AC	ALTERNATING CURRENT	HV	HIGH VOLTAGE
AVR	AUTOMATIC VOLTAGE REGULATOR	INC	INCOMER CIRCUIT BREAKER
BC	BUS COUPLER CIRCUIT BREAKER	LV	LOW VOLTAGE
BR	BUS RISER	O	OUTGOING CIRCUIT BREAKER
CB	CIRCUIT BREAKER	SWG	SWITCHGEAR
DC	DIRECT CURRENT	UPS	UNINTERRUPTIBLE POWER SYSTEM
DF	DISTANCE BETWEEN FIXATION POINTS		

KEY PLAN



REV	DATE	DESCRIPTION	BY	CHECKED	DESIGNED	APPROV
3	24.08.20	RE-ISSUED FOR CONSTRUCTION	R.M	SH.A	M.R	M.A
2	05.05.20	ISSUED FOR CONSTRUCTION	M.M.A	SH.A	M.R	M.A
1	11.11.19	RE-ISSUED FOR DESIGN	M.M.A	SH.A/M.A	M.A.R	M.A
0	09.09.19	ISSUED FOR DESIGN	M.M.A	SH.A/M.A	M.A.R	M.A

EGPC
THE EGYPTIAN GENERAL PETROLEUM CO.
الهيئة العامة المصرية للبترول

FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC) لحساب الهيئة العامة المصرية للبترول

AT : AGROOD لموقع : عجرود

EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
SUBSTATION ELECTRICAL EQUIPMENT LAYOUT

التركيبي الهندسي للصناعات البترولية والكيماوية
Enppi إنبي
ENGINEERING FOR THE PETROLEUM AND PROCESS INDUSTRIES

SCALE	ENPPI DRAWING NUMBER	SHEET	REVISION
1:100	01251-100-030-EEB-001	1 OF 1	3

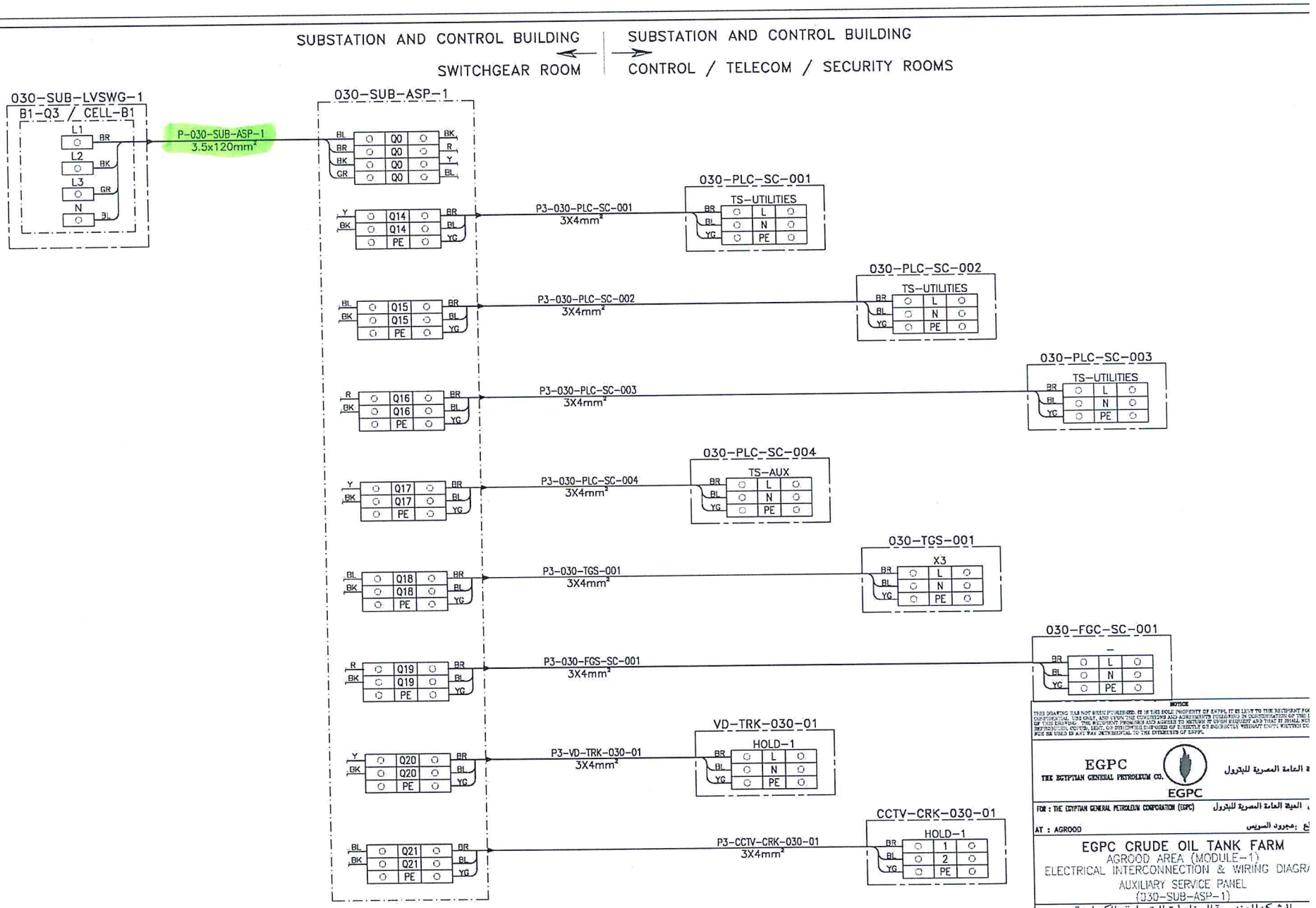
System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

12.03- Motor Datasheets

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

12.04- Electrical Cables Schedule

PAGE	Cable Mark	GL1	FROM	TO	GL2	CABLEService	Service Voltage	KW	Size	Type	L
16	P-030-SUB-UPDP-1	WP	030-SUB-ACUPS-1	030-SUB-UPDP-1	WP	3PH POWER FEEDER	400VAC	100	4x25	4B	15
18	P-030-SUB-ASP-1	WP	030-SUB-LVSWG-1 (B1-Q3)	030-SUB-ASP-1	WP	3PH POWER FEEDER	400VAC	65	3.5x120	4B	50
33	P1-030-MOVDP-1	WP	030-SUB-LVSWG-1	030-MOVDP-1	EX	3PH POWER FEEDER	400VAC	50	3.5x120	4B	370
33	P2-030-MOVDP-1	WP	030-SUB-UPDP-1	030-MOVDP-1	EX	3PH POWER FEEDER	400VAC	3	4x25	4B	370


SUBSTATION AND CONTROL BUILDING
SWITCHGEAR ROOM
SUBSTATION AND CONTROL BUILDING
CONTROL / TELECOM / SECURITY ROOMS
030-SUB-LVSWG-1
B1-Q3 / CELL-B1
L1
L2
L3
N
P-030-SUB-ASP-1
3.5x120mm²
030-SUB-ASP-1
Q0
Q14
Q15
Q16
Q17
Q18
Q19
Q20
Q21
P3-030-PLC-SC-001
3X4mm²
030-PLC-SC-001
TS-UTILITIES
P3-030-PLC-SC-002
3X4mm²
030-PLC-SC-002
TS-UTILITIES
P3-030-PLC-SC-003
3X4mm²
030-PLC-SC-003
TS-UTILITIES
P3-030-PLC-SC-004
3X4mm²
030-PLC-SC-004
TS-AUX
P3-030-TGS-001
3X4mm²
030-TGS-001
X3
P3-030-FGS-SC-001
3X4mm²
030-FGC-SC-001
P3-VD-TRK-030-01
3X4mm²
VD-TRK-030-01
HOLD-1
P3-CCTV-CRK-030-01
3X4mm²
CCTV-CRK-030-01
HOLD-1
EGPC
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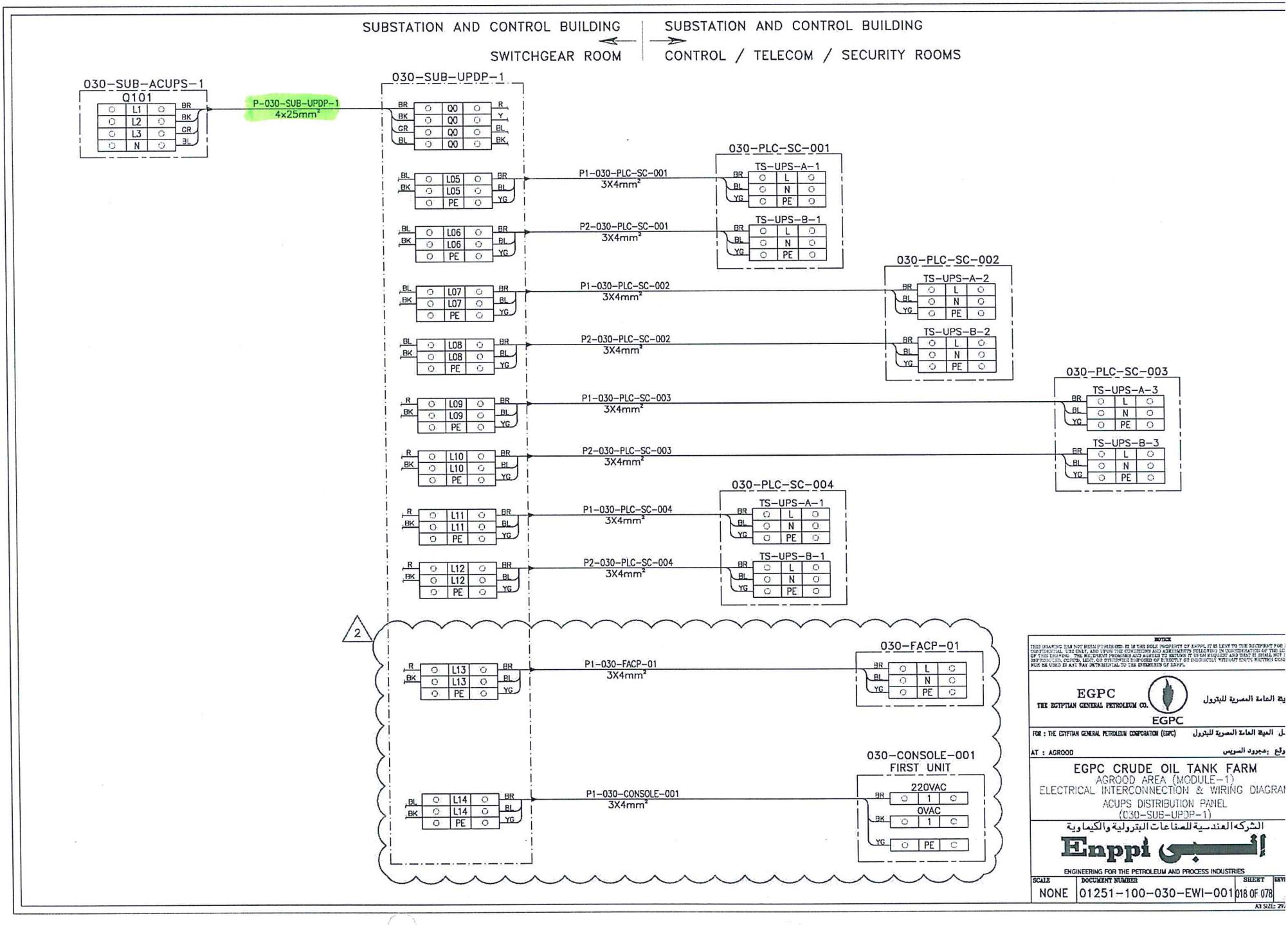
FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC)
AT : AGROOD
EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
ELECTRICAL INTERCONNECTION & WIRING DIAGRA
AUXILIARY SERVICE PANEL
(030-SUB-ASP-1)
Enppi
ENGINEERING FOR THE PETROLEUM AND PROCESS INDUSTRIES
SCALE
NONE
DOCUMENT NUMBER
01251-100-030-EWI-001
SHEET
020 OF 078



NOTICE

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EGPC
الهيئة العامة المصرية للبترول

FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC) الهيئة العامة المصرية للبترول

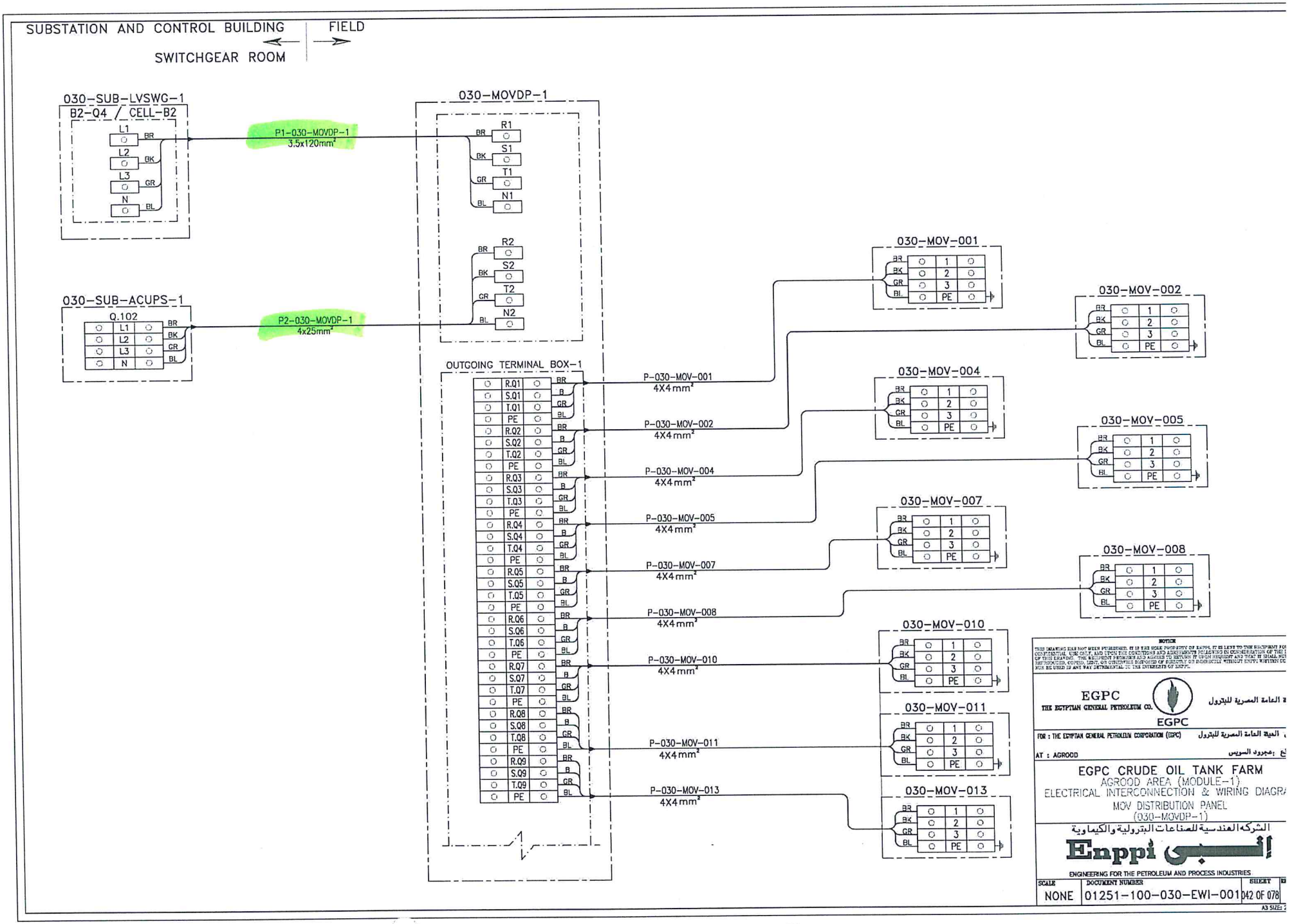
AT : AGROOD موقع :مجرود السويس

EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
ELECTRICAL INTERCONNECTION & WIRING DIAGRAM
ACUPS DISTRIBUTION PANEL
(030-SUB-UPDP-1)

الشركة العندسية للصناعات البترولية والكيماوية
Enppi إنبي
ENGINEERING FOR THE PETROLEUM AND PROCESS INDUSTRIES

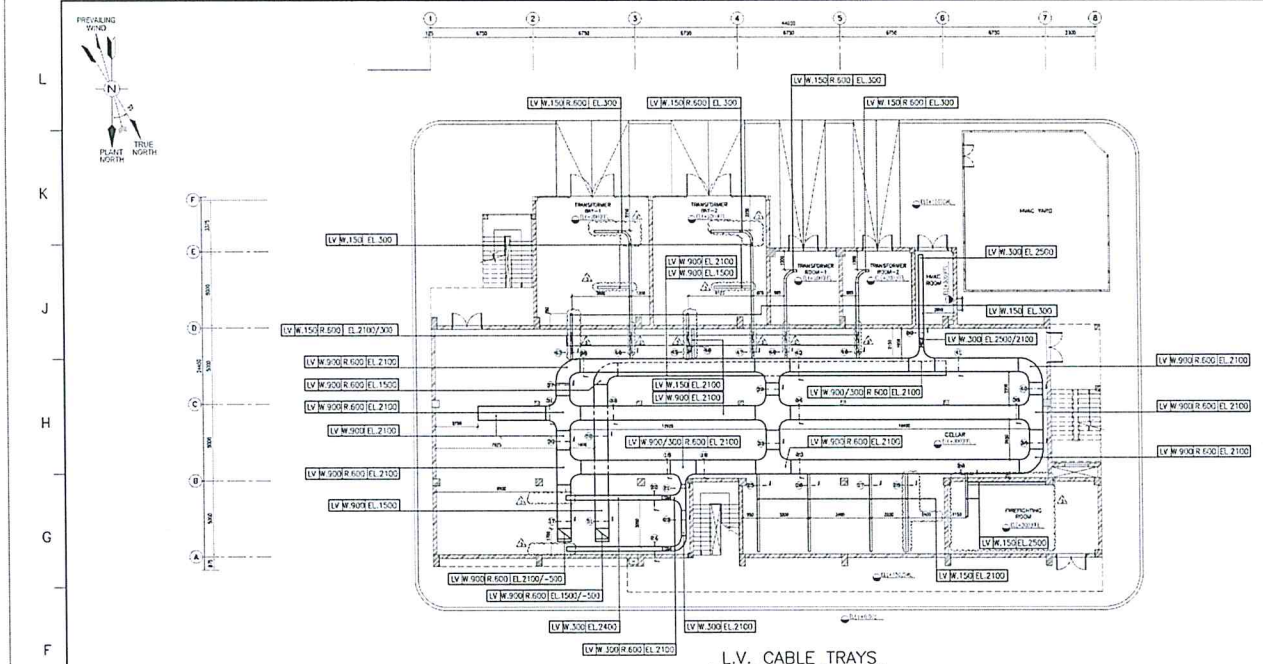
SCALE	DOCUMENT NUMBER	SHEET	REV
NONE	01251-100-030-EWI-001	018 OF 078	

A3 SIZE: 29.

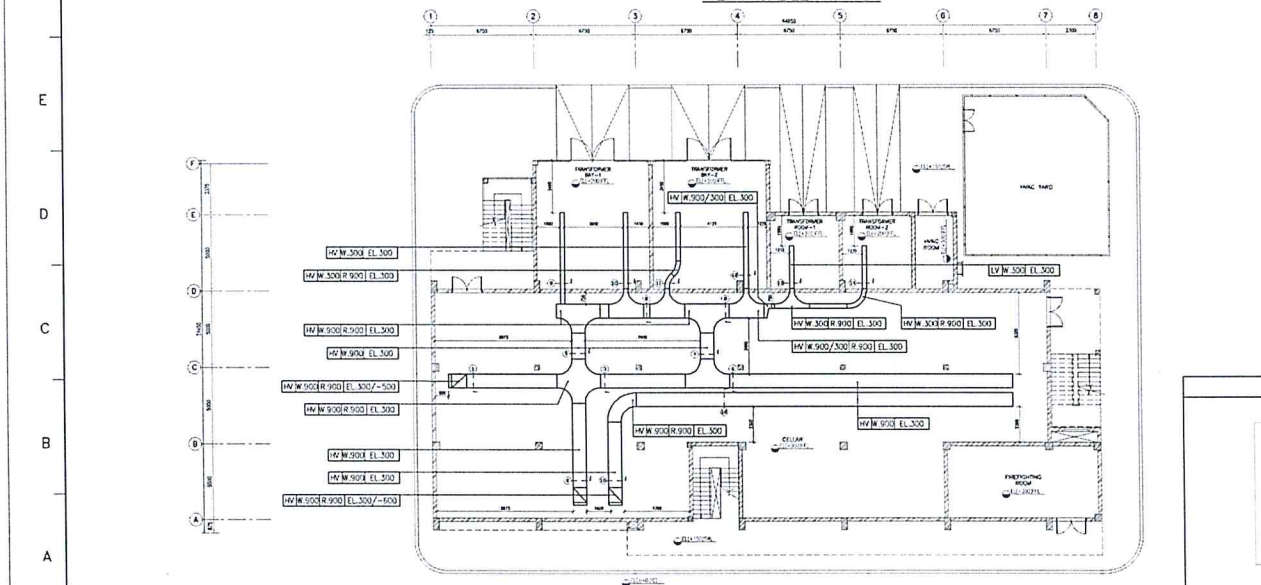

SUBSTATION AND CONTROL BUILDING
SWITCHGEAR ROOM
FIELD
030-SUB-LVSWG-1
B2-Q4 / CELL-B2
L1
L2
L3
N
BR
BK
GR
BL
P1-030-MOVDP-1
3.5x120mm²
030-MOVDP-1
R1
S1
T1
N1
R2
S2
T2
N2
030-SUB-ACUPS-1
Q.102
P2-030-MOVDP-1
4x25mm²
OUTGOING TERMINAL BOX-1
R.Q1
S.Q1
T.Q1
PE
R.Q2
S.Q2
T.Q2
R.Q3
S.Q3
T.Q3
R.Q4
S.Q4
T.Q4
R.Q5
S.Q5
T.Q5
R.Q6
S.Q6
T.Q6
R.Q7
S.Q7
T.Q7
R.Q8
S.Q8
T.Q8
R.Q9
S.Q9
T.Q9
P-030-MOV-001
4X4mm²
P-030-MOV-002
4X4mm²
P-030-MOV-004
4X4mm²
P-030-MOV-005
4X4mm²
P-030-MOV-007
4X4mm²
P-030-MOV-008
4X4mm²
P-030-MOV-010
4X4mm²
P-030-MOV-011
4X4mm²
P-030-MOV-013
4X4mm²
030-MOV-001
030-MOV-002
030-MOV-004
030-MOV-005
030-MOV-007
030-MOV-008
030-MOV-010
030-MOV-011
030-MOV-013
1
2
3
PE
NOTICE
EGPC
THE EGYPTIAN GENERAL PETROLEUM CO.
الهيئة العامة المصرية للبترول
FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC)
AT : AGROOD
EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
ELECTRICAL INTERCONNECTION & WIRING DIAGRA
MOV DISTRIBUTION PANEL
(030-MOVDP-1)
الشركه الهندسية للصناعات البترولية والكيماوية
Enppi
ENGINEERING FOR THE PETROLEUM AND PROCESS INDUSTRIES
SCALE
NONE
DOCUMENT NUMBER
01251-100-030-EWI-001
SHEET
042 OF 078
A3 SIZE

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

12.05- Electrical Cables Laying Certificates

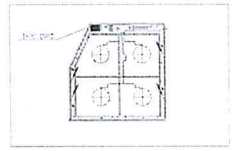


L.V. CABLE TRAYS



H.V. CABLE TRAYS

KEY PLAN



SCALE = 1 : 150

REFERENCE DRAWINGS AND DOCUMENTS

01251-100-030-CBD-221	SUBSTATION & CONTROL ROOM CELLAR FLOOR PLAN
01251-100-030-CBD-202	SUBSTATION & CONTROL ROOM FOUNDATION PLAN & DETAILS
01251-100-030-ECB-001	SUBSTATION ELECTRICAL EQUIPMENT LAYOUT
01251-100-030-EES-003	OUTDOOR ELECTRICAL CABLE SECTIONS
01251-100-030-EES-004	SUBSTATION ELECTRICAL CABLE SECTIONS
01251-100-030-ECL-001	OUTDOOR ELECTRICAL CABLE ROUTING LAYOUT
01251-100-030-ECS-001	AGROOD AREA (MODULE-1) ELECTRICAL CABLE SCHEDULE
01251-100-000-EDB-001	ELECTRICAL DESIGN BASIS

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. FOR BOTTOM-ENTRY SUBSTATIONS (HAVING TWO FLOORS), CABLES SHOULD ENTER SWITCHGEAR ROOM VIA THE FOLLOWING MEANS:
   - VERMIN PROOF GLAND PLATES, WHICH ARE BOTTOM PARTS OF SWITCHGEARS AND PANELS.
   - SEALING EXTENSION CABLE BOXES (WHICH SHALL BE INSTALLED INSIDE CELLAR FLOOR AND JUST UNDER SWITCHGEAR OR PANEL) IN CASE THAT AREA REQUIRED TO ACCOMMODATE CABLES GLANDS HOLES ARE EXCEEDING DIMENSIONS OF THE GLAND PLATES.
3. PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE SEALED IN SUCH A WAY THAT THE ORIGINAL FIRE RATING IS RESTORED. AN APPROVED FIRE RATED MORTAR SHALL BE USED. THE SECTION OF CABLES INSIDE THE AREA TO BE SEALED SHALL BE CAREFULLY CLEANED.
4. CABLES SHALL BE IDENTIFIED WITH STAINLESS STEEL MARKERS ATTACHED TO EACH CABLE AND STAMPED WITH THE CABLE TAG AT THE FOLLOWING LOCATIONS:
   4.1 WITH MAXIMUM INTERVALS OF 30 METERS FOR ABOVEGROUND CABLES.
   4.2 WHERE CABLES CHANGES THEIR DIRECTIONS.
   4.3 AT BOTH CABLE ENDS.
5. ALL CABLES IN TRAYS SHALL BE GROUPED ACCORDING TO VOLTAGE, INSULATION CLASS AND FUNCTION AS FOLLOWING:
   5.1 HIGH VOLTAGE CABLES SHALL RUN IN SEPARATE CABLE TRAYS.
   5.2 CONTROL CABLES AND LOW VOLTAGE CABLES MAY RUN IN THE SAME CABLE TRAY.
   5.3 LIGHTING CABLES AND LOW VOLTAGE CABLES MAY RUN IN THE SAME CABLE TRAY.
6. MAXIMUM ALLOWABLE FILL AREA ELECTRICAL CABLES INSTALLED IN CABLE TRAYS SHALL BE 30%.
7. CABLES INSTALLED ON TRAYS SHALL BE LAID NEATLY IN PARALLEL RUNS WITH NO CROSSING OVER OF CABLES, EXCEPT AS APPROVED BY CLIENT.
8. MULTI-CORE CABLES SHALL BE FIXED WITH HEAVY DUTY NYLON CABLE-TIES TO RUNGS OF CABLE TRAYS WITH MAXIMUM SPACING 1000MM FOR HORIZONTAL RUN, AND 500MM FOR VERTICAL RUN.
9. CABLE TRAYS SHALL BE INSTALLED AS A COMPLETE SYSTEM. CABLE TRAY SYSTEM SHALL NOT HAVE MECHANICALLY DISCONTINUOUS SEGMENTS OF CABLE TRAY RUNS.
10. ARMORED CABLES MAY BE EXTENDED FROM CABLE TRAYS TO EQUIPMENT.
11. CABLE TRAYS RUN IN INDOOR AREAS SHALL NOT HAVE COVERS.
12. MINIMUM VERTICAL CLEARANCE BETWEEN CABLE TRAYS SHALL BE 400MM.
13. MINIMUM CROSSING DISTANCE BETWEEN CABLE TRAYS SHALL BE 150MM.
14. CONSTRUCTION CONTRACTOR RESPONSIBILITY SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING:
   14.1 CABLES CUTTING SHALL BE CARRIED OUT PREFERABLY AFTER ACCURATE POSITIONING, IN ANY OTHER CASE THE CUTTING LENGTH SHALL BE DETERMINED BY ACCURATE ROUTE MEASURE BEFORE CUTTING.
   14.2 PULLING STRESSES PERMITTED DURING INSTALLATION AND OPERATION SHALL BE IN ACCORDANCE WITH THOSE ESTABLISHED BY CABLES MANUFACTURER.
   14.3 ALL CABLE BENDS SHALL BE SO MADE THAT THE CABLE WILL NOT BE DAMAGED. THE MINIMUM RADIUS OF THE INSIDE OF THE BEND SHALL NOT BE LESS THAN TWELVE TIMES THE OVERALL CABLE DIAMETER AND NOT LESS THAN THAT RECOMMENDED BY THE CABLE MANUFACTURER.
   14.4 CONSTRUCTION CONTRACTOR SHALL PROVIDE MARK-UP DRAWING FOR CABLE ROUTING LAYOUTS.
   14.5 THE FOLLOWING ELECTRICAL CONSUMABLE MATERIALS SHALL BE IN CONSTRUCTION CONTRACTOR SCOPE OF SUPPLY:
      14.5.1. STAINLESS STEEL CABLE MARKERS.
      14.5.2. WIRES MARKERS.
      14.5.3. CABLES TIES.
      14.5.4. PIN/FORK/RING TERMINALS FOR CONTROL CABLES
      14.5.5. STAINLESS STEEL BOLTS/U-BOLTS/WASHERS/NUTS
      14.5.6. HDG STEEL SUPPORTS & THREADED RODS FOR FIXATION OF CABLE TRAYS.
      14.5.7. HDG CLAMPS FOR STEEL CONDUITS.
      14.5.8. CABLE CLAMPS.
      14.5.9. FIRE RATED FOAM FOR SEALING SUBSTATION/BATTERY ROOM OPENINGS.
15. ALL CABLE SECTIONS NUMBERS ARE CHANGED.

IDENTIFICATION

- FOR IDENTIFICATION SEE DRAWING NO. 01251-100-030-ECB-001 SHEET NO. 1 OF 2.

REV	DATE	DESCRIPTION	BY	CHECKED	DESIGNED	APPROVED
3	25/09/23	RE-ISSUED FOR CONSTRUCTION	R.M	SH.A	M.R	M.A
2	06/09/23	ISSUED FOR CONSTRUCTION	A.S.M	SH.A	A.S.M	M.A
1	17/07/23	RE-ISSUED FOR DESIGN	A.S.M	SH.A/M.A	A.S.M	H.A
0	27/06/23	ISSUED FOR DESIGN	A.S.M	SH.A/M.A	A.S.M	H.A

EGPC
THE EGYPTIAN GENERAL PETROLEUM CO.
الهيئة العامة المصرية للبترول
EGPC

FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC) لحساب الهيئة العامة المصرية للبترول

AT : AGROOD الموقع : عجرود

EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
SUBSTATION ELECTRICAL CABLE ROUTING LAYOUT

التركي الهندسية للصناعات البترولية والكيماوية
Enppi إنبي
ENGINEERING FOR THE PETROLEUM AND PROCESS INDUSTRIES

SCALE	ENPPI DRAWING NUMBER	SHEET	REVISION
1:150	01251-100-030-ECB-001	2 OF 2	3

A1(841.00MM x 594.00MM)

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

12.06- Electrical Cables Testing Certificates

Enppi

EGPC CRUDE OIL TANK FARM

EGPC

INSPECTION AND TEST REPORT FOR

CABLE INSULATION RESISTANCE TEST

SYSTEM NO.:

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	DOUCUMENT No.	DISPLINE	SHEET NO
PTJ-ELE-RFI- 218	14/06/2021	ITR-EL-0006A	ELECTRICAL	

INSTRUMENT TYPE:	SERIAL:	SERVICE VOLTAGE:	TEST VOLTAGE:	AREA / PACKAGE:
HIGH VOLTAGE INSULATION TESTER-SANWA-MG5000	17015900385	400	1000	SUBSTATION

NO	Item/Tag NO.	CABLE SIZE	Continuity Test	PHASE TO PHASE			PHASE TO NUETRAL"M.Ohm"			PHASES & NUETRAL TO ARMOR "M.Ohm"				RESULT	
				BR-BK	BR-GR	BK-GR	BR-B	BK-B	GR-B	BR-ARM	BK-ARM	GR-ARM	B-ARM	Pass	FAIL
1	P-030-FIT-007	3x4	✓				ol							✓	
2	P1-030-MOVDP-1	3.5x120	✓	ol	ol	ol	ol							✓	
3	P2-030-MOVDP-1	4x25	✓	ol	ol	ol	ol							✓	
4	P-030-MOV-001	4x4	✓	↓	↓	↓	↓							✓	
5	P-030-MOV-010	4x4	✓	↓	↓	↓	↓							✓	
6	P-030-MOV-011	4x4	✓	↓	↓	↓	↓							✓	
7	P-030-MOV-013	4x4	✓	↓	↓	↓	↓							✓	
8	P-030-MOV-014	4x4	✓	↓	↓	↓	↓							✓	
9	P-030-MOV-019	4x4	✓	↓	↓	↓	↓							✓	
10	P-030-MOV-021	4x4	✓	↓	↓	↓	↓							✓	
11	P-030-MOV-023	4x4	✓	↓	↓	↓	↓							✓	
12	P-030-MOV-079	4x4	✓	↓	↓	↓	↓							✓	
13	P-030-MOV-087	4x4	✓	↓	↓	↓	↓							✓	
14	P-030-MOV-088	4x4	✓	↓	↓	↓	↓							✓	
15	P-030-MOV-090	4x4	✓	↓	↓	↓	↓							✓	
16	P-030-MOV-213	4x4	✓	↓	↓	↓	↓							✓	
17	P-030-SDV-106	4x4	✓	↓	↓	↓	↓							✓	
18	P-030-SDV-103	4x4	✓	↓	↓	↓	↓							✓	
	P-030-SDV-104	4x4	✓	↓	↓	↓	↓							✓	

Remarks :-

Referance :-

	PETROJET	ENPPI	PMC
NAME		® Islam Sher...	
SIGNATURE			M. Omar
DATE			

Enppi

EGPC CRUDE OIL TANK FARM

EGPC

INSPECTION AND TEST REPORT FOR

CABLE INSULATION RESISTANCE TEST

SYSTEM NO.:

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	DOUCUMENT No.	DISPLINE	SHEET NO
PTJ-ELE-RFI-		ITR-EL-0006A	ELECTRICAL	

INSTRUMENT TYPE:	SERIAL:	SERVICE VOLTAGE:	TEST VOLTAGE:	AREA / PACKAGE:
HIGH VOLTAGE INSULATION TESTER-SANWA-MG5000	17015900385	400	1000	SUBSTATION

NO	Item/Tag NO.	CABLE SIZE	Continuity Test	PHASE TO PHASE			PHASE TO NUETRAL"M.Ohm"			PHASES & NUETRAL TO ARMOR "M.Ohm"				RESULT	
				BR-BK	BR-GR	BK-GR	BR-B	BK-B	GR-B	BR-ARM	BK-ARM	GR-ARM	B-ARM	Pass	FAIL
17	P-030-SUB-LPDP-1	3.5x120	✓	o.l	o.l	o.l	o.l							✓	
18	P-030-SUB-ASP-1	3.5x120	✓	o.l	o.l	o.l	o.l							✓	
19	~~P-030-EPMI-UPDP-1~~	3.5x50	✓	o.l	o.l	o.l	o.l							✓	
20	P1-030-SUB-ACUPS-1	3x10	✓	o			o.l							✓	
21	P-030-SUB-IRP-1	3x10	✓				o.l							✓	
22	D-030-SUB-LVSWG-1A	3x10	✓				o.l							✓	
23	D-030-SUB-LVSWG-1B	3x10	✓				o.l							✓	
24	D-030-SUB-IRP-1	3x10	✓				o.l							✓	
25	P1-030-SUB-LVSWG-1A	3x10	✓				o.l							✓	
26	P1-030-SUB-LVSWG-1B	3x10	✓				o.l							✓	
27	C1-030-SUB-ACUPS-1	3x2.5	✓				o.l							✓	
28	C2-030-SUB-ACUPS-1	3x2.5	✓				o.l							✓	
29	C1-030-SUB-DCUPS-1	3x2.5	✓				o.l							✓	
30	C2-030-SUB-DCUPS-1	3x2.5	✓				o.l							✓	
31	P-030-SUB-AVR-1A	3x4	✓				o.l							✓	
32	P-030-SUB-AVR-1B	3x4	✓				o.l							✓	

Remarks :-

Referance :-

	PETROJET	ENPPI	PMC

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

12.07- Electrical Cables Termination Certificates

Enppi / PETROJET	EGPC CRUDE OIL TANK FARM	EGPC
Owner : Egyptian General Petroleum Corporation (EGPC)		Project No: 01251-100-030 :01251-100-031
Contractor CONSORTIUM (ENPPI / PETROJET)		Document No: ITR-QC-0001 Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : ~~LVSWG~~ Panel Installation

NOTIFICATION NO. : PTJ-RFI-EL- 144 DISCIPLINE : ELECTRICAL

DATE : : 3/10/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	UPDP Panel Installation	AGROUD MODULE 1 SUB BUILDING	10-Mar-21				
1	030-SUB-UPDP-1						
2							

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :		Review	
SIGNATURE			
DATE			

Enppi PETROJET

EGPC CRUDE OIL TANK FARM

EGPC

INSPECTION AND TEST REPORT FOR

LVSWG AND PANEL INSTALLATION

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	DOUCUMENT No.	DISPLINE	SHEET NO
PTJ-ELE-RFI- 144		ITR-EL-0012	ELECTRICAL	

JOB DESCRIPTION	AREA DESCRIPTION
	AGROUD MODULE 2 SUB BUILDING

Tag No.		Serial No.	

NO.	INSPECTION	RESULT		
		ACCEPT	REJECT	N/A.
1	Verify that equipment name plates are according to the corresponding drawing	✓		
2	Inspect physical and mechanical condition of the equipment and all components for clear damage.	✓		
3	Verify appropriate anchorage, required area clearances, physical damage, and correct alignment and cleanliness.	✓		
4	Inspect all doors, panels, and sections for paint, dents, scratches, fit, and missing hardware.	✓		
5	Verify that the barriers and covers are installed correctly.		✓	✓
6	Verify that filters are in place and all ventilation openings are clear from any kind of obstacles.		✓	✓
7	Verify that main bus bar is connected between the cells.			✓
8	Verify that the earth bar is connected between the cells and connected to the earth.			✓
9	Verify the tightness of accessible bolted electrical connections using the calibrated torque-wrench method			✓
10	After tightening each electrical connection to the appropriate torque, apply some Varnish between the nut and the screw (or else , between the screw's head and			✓
11	Confirm that lubricants have been correctly applied at the recommended locations.			✓
12	Inspect all mechanical indicating devices for correct operation.			✓
13	Verify that draw out.disconnecting contacts and interlocks function correctly.			✓
14	Verify that fuse and/or circuit breaker size and type correspond to drawings.	✓		
15	Verify that current and potential transformer ratios correspond to drawings.			✓
16	Verify that all the interconnection control wires between the cells have been made correctly reference to the control drawings	✓		
17	Verify that customer connections to remote power, operators, interlocks, and indicators have been made.			✓

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE			
DATE			

Enppi / PETROJET	EGPC CRUDE OIL TANK FARM	EGPC
Owner : Egyptian General Petroleum Corporation (EGPC)		Project No: 01251-100-030 :01251-100-031
Contractor CONSORTIUM (ENPPI / PETROJET)		Document No: ITR-QC-0001 Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : Panel Installation

NOTIFICATION NO. : PTJ-RFI-EL- 145 DISCIPLINE : ELECTRICAL

DATE : : 3/10/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	ASP Panel Installation	AGROUD MODULE 1 SUB BUILDING	10-Mar-21				
1	030-SUB-ASP-1						
2							

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :		Reviewed	
SIGNATURE	Sabl		
DATE			

Enppi PETROJET

EGPC CRUDE OIL TANK FARM

EGPC

INSPECTION AND TEST REPORT FOR

LVSWG AND PANEL INSTALLATION

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	DOUCUMENT No.	DISPLINE	SHEET NO
PTJ-ELE-RFI- 145		ITR-EL-0012	ELECTRICAL	

JOB DESCRIPTION	AREA DESCRIPTION
	AGROUD MODULE 2 SUB BUILDING

Tag No.		Serial No.	

NO.	INSPECTION	RESULT		
		ACCEPT	REJECT	N/A.
1	Verify that equipment name plates are according to the corresponding drawing	✓		
2	Inspect physical and mechanical condition of the equipment and all components for clear damage.	✓		
3	Verify appropriate anchorage, required area clearances, physical damage, and correct alignment and cleanliness.	✓		
4	Inspect all doors, panels, and sections for paint, dents, scratches, fit, and missing hardware.	✓		
5	Verify that the barriers and covers are installed correctly.	✓		
6	Verify that filters are in place and all ventilation openings are clear from any kind of obstacles.			✓
7	Verify that main bus bar is connected between the cells.			✓
8	Verify that the earth bar is connected between the cells and connected to the earth.		✓	
9	Verify the tightness of accessible bolted electrical connections using the calibrated torque-wrench method			✓
10	After tightening each electrical connection to the appropriate torque, apply some Varnish between the nut and the screw (or else , between the screw's head and			✓
11	Confirm that lubricants have been correctly applied at the recommended locations.			✓
12	Inspect all mechanical indicating devices for correct operation.			✓
13	Verify that draw out disconnecting contacts and interlocks function correctly.			✓
14	Verify that fuse and/or circuit breaker size and type correspond to drawings.	✓		
15	Verify that current and potential transformer ratios correspond to drawings.			✓
16	Verify that all the interconnection control wires between the cells have been made correctly reference to the control drawings	✓		
17	Verify that customer connections to remote power, operators, interlocks, and indicators have been made.			✓

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE			
DATE			

Enppi

EGPC CRUDE OIL TANK FARM

EGPC

Owner : Egyptian General Petroleum Corporation (EGPC)

Project No: 01251-100-030
:01251-100-031

Contractor CONSORTIUM (ENPPI / PETROJET)

Document No: ITR-QC-0001
Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : CABLE TERMINATION AND TEST

NOTIFICATION NO. : PTJ-ELE-RFI- 160 DISCIPLINE : ELEC

DATE : : 27/03/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
18	D2-030-SUB-ACUPS-1-BAT-A	SUBSTATION					
19	D1-030-SUB-ACUPS-1-BAT-B	SUBSTATION					
20	D2-030-SUB-ACUPS-1-BAT-B	SUBSTATION					
21	D1-030-SUB-DCUPS-CB-A	SUBSTATION					
22	D2-030-SUB-DCUPS-CB-A	SUBSTATION					
23	D1-030-SUB-DCUPS-CB-B	SUBSTATION					
24	D2-030-SUB-DCUPS-CB-B	SUBSTATION					
25	D1-030-SUB-DCUPS-1-BAT-A	SUBSTATION					
26	D2-030-SUB-DCUPS-1-BAT-A	SUBSTATION					
27	D1-030-SUB-DCUPS-1-BAT-B	SUBSTATION					
28	D2-030-SUB-DCUPS-1-BAT-B	SUBSTATION					
29	P-030-SUB-LPDP-1	SUBSTATION					
30	P-030-SUB-ASP-1	SUBSTATION					
31	P-030-EPM1-UPDP-1	SUBSTATION					
32	P1-030-SUB-ACUPS-1	SUBSTATION					
33	P-030-SUB-IRP-1	SUBSTATION					
34	D-030-SUB-LVSWG-1A	SUBSTATION					

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE			
DATE			

Enppi

EGPC CRUDE OIL TANK FARM

EGPC

Owner : Egyptian General Petroleum Corporation (EGPC)

Project No: 01251-100-030
:01251-100-031

Contractor CONSORTIUM (ENPPI / PETROJET)

Document No: ITR-QC-0001
Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : CABLE TERMINATION AND TEST

NOTIFICATION NO. : PTJ-ELE-RFI- 160 DISCIPLINE : ELEC

DATE : : 27/03/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
35	D-030-SUB-LVSWG-1B	SUBSTATION					
36	D-030-SUB-IRP-1	SUBSTATION					
37	P1-030-SUB-LVSWG-1A	SUBSTATION					
38	P1-030-SUB-LVSWG-1B	SUBSTATION					
39	C1-030-SUB-ACUPS-1	SUBSTATION					
40	C2-030-SUB-ACUPS-1	SUBSTATION					
41	C1-030-SUB-DCUPS-1	SUBSTATION					
42	C2-030-SUB-DCUPS-1	SUBSTATION					
43	P-030-SUB-AVR-1A	SUBSTATION					
44	P-030-SUB-AVR-1B	SUBSTATION					
45	P1-030-SUB-DCUPS-1	SUBSTATION					
46	P-030-SUB-UPDP-1	SUBSTATION					
47	P-030-SUB-DCUPS-1A	SUBSTATION					
48	P-030-SUB-DCUPS-1B	SUBSTATION					

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE			
DATE			

Enppi PETROJET

EGPC CRUDE OIL TANK FARM

EGPC

INSPECTION AND TEST REPORT FOR

CABLE TERMINATION AND SPLICING

SYSTEM NO.:

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
PTJ-ELE-RFI- 160	27/03/2021	ITR-EL-0009	ELEC	1 OF 1

Item/Tag NO.	For All Cables tages in PTJ-ELE-RFI-				
Type :-		Core:		Size:	

NO.	Description of check	RESUNT		
		ACCEPT	REJECT	N/A.
1	Check cable glands are correct type and size as per cable schedule.	✓		
2	Check there are no damages to cores, termination chamber layout is satisfactory, core identification is correct, crimped and pins satisfactory.	✓		
3	Check cable tag is done correctly.	✓		
4	Test and confirm conductor, phase continuity.	✓		
5	Check insulation resistance test (megger) is completed *'	✓		
6	Check Hi-pot test is completed, only for MV/HV cables *''			✓
7	Connect all cores at both ends and confirm all connections are correct as per termination diagram.	✓		
8	Confirm spare cores, screens are earthed and conform to design drawings/specifications	✓		✓
9	Check enclosure cover is installed , no damages and no bolts are missing	✓		
10	Calibration test certificate of testing equipment to be checked.	✓		

Remarks :

*' : ITR-EL-006A/B

*'' :ITR-EL-008

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE			
DATE			

Enppi

EGPC CRUDE OIL TANK FARM

EGPC

Owner : Egyptian General Petroleum Corporation (EGPC)

Project No: 01251-100-030
:01251-100-031

Contractor CONSORTIUM (ENPPI / PETROJET)

Document No: ITR-QC-0001
Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : CABLE TERMINATION AND TEST

NOTIFICATION NO. : PTJ-ELE-RFI- 218 DISCIPLINE : ELEC

DATE : : 14/06/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
1	P1-030-MOVDP-1	FIELD					
2	P2-030-MOVDP-1	FIELD					
3	P-030-MOV-001	FIELD					
4	P-030-MOV-010	FIELD	Hold				
5	P-030-MOV-011	FIELD	Hold				
6	P-030-MOV-013	FIELD	Hold				
7	P-030-MOV-014	FIELD	Hold				
8	P-030-MOV-019	FIELD					
9	P-030-MOV-021	FIELD					
10	P-030-MOV-023	FIELD					
11	P-030-MOV-079	FIELD	Hold				
12	P-030-MOV-087	FIELD					
13	P-030-MOV-088	FIELD					
14	P-030-MOV-090	FIELD					
15	P-030-MOV-213	FIELD	Hold				
16	P-030-SDV-103	FIELD					
17	P-030-SDV-106	FIELD	Hold				
18	P-030-FIT-007	FIELD	Hold				Hold.

P-030-SDV-104

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :		® Islam Sherif	
SIGNATURE			M. Omar
DATE			

Enppi PETROJET

EGPC CRUDE OIL TANK FARM

EGPC

INSPECTION AND TEST REPORT FOR

CABLE TERMINATION AND SPLICING

SYSTEM NO.:

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
PTJ-ELE-RFI- 218	14/06/2021	ITR-EL-0009	ELEC	1 OF 1

Item/Tag NO.	For All Cables tages in PTJ-ELE-RFI- 218				
Type :-		Core:		Size:	

NO.	Description of check	RESUNT		
		ACCEPT	REJECT	N/A.
1	Check cable glands are correct type and size as per cable schedule.	✓		
2	Check there are no damages to cores, termination chamber layout is satisfactory, core identification is correct, crimped and pins satisfactory.	✓		
3	Check cable tag is done correctly.	✓		
4	Test and confirm conductor, phase continuity.	✓		
5	Check insulation resistance test (megger) is completed *'	✓		
6	Check Hi-pot test is completed, only for MV/HV cables *''			✓
7	Connect all cores at both ends and confirm all connections are correct as per termination diagram.	✓		
8	Confirm spare cores, screens are earthed and conform to design drawings/specifications	✗		✓
9	Check enclosure cover is installed , no damages and no bolts are missing	✓		
10	Calibration test certificate of testing equipment to be checked.	✓		

Remarks :

*' : ITR-EL-006A/B

*'' :ITR-EL-008

	PETROJET	ENPPI	PMC
NAME :		® Islam Sherif	
SIGNATURE			M. Omar
DATE			

Enppi

EGPC CRUDE OIL TANK FARM

EGPC

Owner :	Egyptian General Petroleum Corporation (EGPC)	Project No: 01251-100-030 :01251-100-031
Contractor	CONSORTIUM (ENPPI / PETROJET)	Document No: ITR-QC-0001 Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : Panel Installation

NOTIFICATION NO. : PTJ-RFI-EL- 210 DISCIPLINE : ELECTRICAL

DATE : : 5/30/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	PANEL INSTALLATION	AGROUD MODULE 1	30-May-21				
1	030-MOVDP-1						
2	030-LPDP-1						

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

* location Change to be marked-up

	PETROJET	ENPPI	PMC
NAME		® Islam Sherif	
SIGNATURE			
DATE			

Enppi PETROJET

EGPC CRUDE OIL TANK FARM

EGPC

INSPECTION AND TEST REPORT FOR

LVSWG AND PANEL INSTALLATION

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	DOUCUMENT No.	DISPLINE	SHEET NO
PTJ-ELE-RFI- 210		ITR-EL-0012	ELECTRICAL	

JOB DESCRIPTION

AREA DESCRIPTION: AGROUD MODULE 1 SUB BUILDING

Tag No.	Refer To RFI 210	Serial No.	

NO.	INSPECTION	RESULT		
		ACCEPT	REJECT	N/A.
1	Verify that equipment name plates are according to the corresponding drawing	✓		
2	Inspect physical and mechanical condition of the equipment and all components for clear damage.	✓		
3	Verify appropriate anchorage, required area clearances, physical damage, and correct alignment and cleanliness.	✓		
4	Inspect all doors, panels, and sections for paint, dents, scratches, fit, and missing hardware.	✓		
5	Verify that the barriers and covers are installed correctly.	✓		
6	Verify that filters are in place and all ventilation openings are clear from any kind of obstacles.			✓
7	Verify that main bus bar is connected between the cells.			
8	Verify that the earth bar is connected between the cells and connected to the earth.	✓		
9	Verify the tightness of accessible bolted electrical connections using the calibrated torque-wrench method			✓
10	After tightening each electrical connection to the appropriate torque, apply some Varnish between the nut and the screw (or else . between the screw's head and			✓
11	Confirm that lubricants have been correctly applied at the recommended locations.			✓
12	Inspect all mechanical indicating devices for correct operation.			✓
13	Verify that draw out disconnecting contacts and interlocks function correctly.			✓
14	Verify that fuse and/or circuit breaker size and type correspond to drawings.	✓		
15	Verify that current and potential transformer ratios correspond to drawings.			✓
16	Verify that all the interconnection control wires between the cells have been made correctly reference to the control drawings	✓		
17	Verify that customer connections to remote power, operators, interlocks, and indicators have been made.			✓

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :		Islam Sherif	
SIGNATURE			

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

12.08- FAT Reports & Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

12.09- SAT Reports & Certificates

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

12.10- Electrical Pre-Commissioning Check Lists

Enppi

PRE-COMMISSIONING CHECK LIST
SMALL POWER DISTRIBUTION PANEL
EL-13 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: 030-SUB-UPDP-1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check equipment assembly for alignment, levelness and foundation fixing details.	✓	
3	Check nameplate details and outgoing feeder labels w.r.t approved documents.	✓	
4	Check the DB and its components for any mechanical damage.	✓	
5	Check equipment earthing connections.	✓	
6	Check connection of gland plate to the earthing busbar.	✓	
7	Check that panel meters & indication lamps are working.	✓	
8	All compartments to be cleaned internally and externally.	✓	
9	All supports needed for power and control cables to be checked.	✓	
10	Check that all connections are tight and secure.	✓	
11	Check all busbar connections and covers according to the approved documents and supplier recommendations.	N/A	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME		® Islam Sherif	
SIGNATURE			
DATE			

Enppi

PRE-COMMISSIONING CHECK LIST
SMALL POWER DISTRIBUTION PANEL
EL-13 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: 030-SUB-UPDP-1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
12	Remove any accidental connections between phases and from phases to ground.	N/A	
13	Check polarity of D.C supplies (if any).	N/A	
14	Check equipment anti- condensation heaters and test insulation resistance (**)	—	
15	Insulation resistance test of busbar bolted connections (Between phases and phases to ground) (*)	N/A	
16	Voltage withstand test of both the main and aux. circuits, this shall be carried out between phases and phases to ground (***)	N/A	
17	Equipment test report and inspection certificate to be checked.	N/A	
18	Check availability of vendor documents, including commissioning and start-up instructions.	N/A	

REMARKS AND OBSERVATIONS :

(*) Refer to table [II]

(**) 500 V megger, min. 10 MΩ (Manufacture's test voltage & minimum values should be referenced)

(***) Refer to table [I]

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME			
SIGNATURE		® Islam Sherif	
DATE			

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PRE-COMMISSIONING CHECK LIST
SMALL POWER DISTRIBUTION PANEL
EL-13 A

VOLTAGE WITHSTAND TEST

TABLE OF TEST VOLTAGES

EQUIPMENT RATED VOLTAGE (kV)	TEST VOLTAGE (KV)
0.6	2

TABLE [I]

NOTES:

All current transformer secondary's shall be short circuit for the duration of the test.
All voltage transformers shall be disconnected by removal of primary and secondary fuses for the duration of the test.
Test shall be carried out with all circuit breakers, isolators and switches closed, but with all the cable cores disconnected.

PRE-COMMISSIONING CHECK LIST
SMALL POWER DISTRIBUTION PANEL
EL-13 A

INSULATION TEST

TABLE OF MINIMUM TEST VOLTAGES

EQUIPMENT RATED VOLTAGE (kV)	TEST VOLTAGE (V) (one minute)	MINIMUM INSULATION RESISTANCE (M.OHMS)
0.6	1000	100
0.04	1000	100
CONTROL WIRING	500	10

TABLE [II]

NOTES:

Manufacture's test voltage & minimum values for insulation resistance should be referenced.

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PRE-COMMISSIONING CHECK LIST
SMALL POWER DISTRIBUTION PANEL
EL-13 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: 030-SUB-ASP - 1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check equipment assembly for alignment, levelness and foundation fixing details.	✓	
3	Check nameplate details and outgoing feeder labels w.r.t approved documents.	✓	
4	Check the DB and its components for any mechanical damage.	✓	
5	Check equipment earthing connections.	✓	
6	Check connection of gland plate to the earthing busbar.	✓	
7	Check that panel meters & indication lamps are working.	✓	
8	All compartments to be cleaned internally and externally.	✓	
9	All supports needed for power and control cables to be checked.	✓	
10	Check that all connections are tight and secure.	✓	
11	Check all busbar connections and covers according to the approved documents and supplier recommendations.	N/A	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME			
SIGNATURE		® Islam Sherif	
DATE			

PRE-COMMISSIONING CHECK LIST
SMALL POWER DISTRIBUTION PANEL
EL-13 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: 030-SUB-ASP - 1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
12	Remove any accidental connections between phases and from phases to ground.	N/A	
13	Check polarity of D.C supplies (if any).	N/A	
14	Check equipment anti- condensation heaters and test insulation resistance (**)	✓	
15	Insulation resistance test of busbar bolted connections (Between phases and phases to ground) (*)	N/A	
16	Voltage withstand test of both the main and aux. circuits, this shall be carried out between phases and phases to ground (***)	N/A	
17	Equipment test report and inspection certificate to be checked.	N/A	
18	Check availability of vendor documents, including commissioning and start-up instructions.	N/A	

REMARKS AND OBSERVATIONS :

(*) Refer to table [II]

(**) 500 V megger, min. 10 MΩ (Manufacture's test voltage & minimum values should be referenced)

(***) Refer to table [I]

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

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PRE-COMMISSIONING CHECK LIST
SMALL POWER DISTRIBUTION PANEL
EL-13 A

VOLTAGE WITHSTAND TEST

TABLE OF TEST VOLTAGES

EQUIPMENT RATED VOLTAGE (kV)	TEST VOLTAGE (KV)
0.6	2

TABLE [I]

NOTES:

All current transformer secondary's shall be short circuit for the duration of the test.
All voltage transformers shall be disconnected by removal of primary and secondary fuses for the duration of the test.
Test shall be carried out with all circuit breakers, isolators and switches closed, but with all the cable cores disconnected.

PRE-COMMISSIONING CHECK LIST
SMALL POWER DISTRIBUTION PANEL
EL-13 A

INSULATION TEST

TABLE OF MINIMUM TEST VOLTAGES

EQUIPMENT RATED VOLTAGE (kV)	TEST VOLTAGE (V) (one minute)	MINIMUM INSULATION RESISTANCE (M.OHMS)
0.6	1000	100
0.04	1000	100
CONTROL WIRING	500	10

TABLE [II]

NOTES:

Manufacture's test voltage & minimum values for insulation resistance should be referenced.

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PRE-COMMISSIONING CHECK LIST
LOW VOLTAGE CABLES
EL-30 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: 030-SUB-UPDP-1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check cables are correctly fixed to trays and supports.	✓	
3	Check cables through walls or ceilings are correctly sealed.	✓	
4	Check that all cables (power/ control) are installed in accordance with cable lists and approved documents.	✓	
5	Check identification tags of all conductors and wires.	✓	
6	Check connection, tightness, termination and joints of cables are correctly executed.	✓	
7	Check where conductors have been terminated using crimped connections; ensure the correct size and type of crimping lugs.	✓	
8	Check that the bending radius of cables is not less than the minimum established.	✓	
9	Cable markers to be installed before covering buried cables or cables in cable trays.	✓	
10	Tie wraps to be used for cable and wires fixation.	✓	
11	Cable connections shall be torque tested.	N/A	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME			
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PRE-COMMISSIONING CHECK LIST
LOW VOLTAGE CABLES
EL-30 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: 030-SUB-UPDP-1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
12	Check that buried cables are correctly covered and protected.	N/A	
13	Trench markers to be checked w.r.t approved documents.	N/A	
14	Check cable glands for tightness & check the correct type of gland has been used for the size and type of installed cables.	✓	
15	Inspect cable laid in trenches, segregation and protection.	✓	
16	Cables to be tested (continuity/insulation resistance). (*)	✓	
17	Equipment test report and inspection certificate to be-checked.	✓	
18	Check availability of vendor documents, including commissioning and start-up instructions. (If Any)	N/A	
19	Calibration test certificate of testing equipment to be checked.	✓	

REMARKS AND OBSERVATIONS :

(*) Refer to table (III).

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
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PRE-COMMISSIONING CHECK LIST
LOW VOLTAGE CABLES
EL-30 A

INSULATION TEST

LOW VOLTAGE CABLES

CABLE VOLTAGE LEVEL	D.C TEST VOLTAGE	MINIMUM INSULATION RESISTANCE (M.OHMS).
1000V	1000V	200

TABLE [III]

NOTES:

Manufacture's test voltage & minimum values for insulation resistance should be referenced.

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PRE-COMMISSIONING CHECK LIST
LOW VOLTAGE CABLES
EL-30 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: 030-SUB-ASP - 1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check cables are correctly fixed to trays and supports.	✓	
3	Check cables through walls or ceilings are correctly sealed.	✓	
4	Check that all cables (power/ control) are installed in accordance with cable lists and approved documents.	✓	
5	Check identification tags of all conductors and wires.	✓	
6	Check connection, tightness, termination and joints of cables are correctly executed.	✓	
7	Check where conductors have been terminated using crimped connections; ensure the correct size and type of crimping lugs.	✓	
8	Check that the bending radius of cables is not less than the minimum established.	✓	
9	Cable markers to be installed before covering buried cables or cables in cable trays.	✓	
10	Tie wraps to be used for cable and wires fixation.	✓	
11	Cable connections shall be torque tested.	N/A	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
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PRE-COMMISSIONING CHECK LIST
LOW VOLTAGE CABLES
EL-30 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: 030-SUB-ASP - 1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
12	Check that buried cables are correctly covered and protected.	N/A	
13	Trench markers to be checked w.r.t approved documents.	N/A	
14	Check cable glands for tightness & check the correct type of gland has been used for the size and type of installed cables.	✓	
15	Inspect cable laid in trenches, segregation and protection.	✓	
16	Cables to be tested (continuity/insulation resistance). (*)	✓	
17	Equipment test report and inspection certificate to be-checked.	✓	
18	Check availability of vendor documents, including commissioning and start-up instructions. (If Any)	N/A	
19	Calibration test certificate of testing equipment to be checked.	✓	

REMARKS AND OBSERVATIONS :

(*) Refer to table (III).

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
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PRE-COMMISSIONING CHECK LIST
LOW VOLTAGE CABLES
EL-30 A

INSULATION TEST

LOW VOLTAGE CABLES

CABLE VOLTAGE LEVEL	D.C TEST VOLTAGE	MINIMUM INSULATION RESISTANCE (M.OHMS).
1000V	1000V	200

TABLE [III]

NOTES:

Manufacture's test voltage & minimum values for insulation resistance should be referenced.

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PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: P-030-SUB-ASP-1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check cables are correctly fixed to trays and supports.	✓	
3	Check cables through walls or ceilings are correctly sealed.	✓	
4	Check that all cables are installed in accordance with cable lists and approved documents.	✓	
5	Check identification tags of all conductors and wires.	✓	
6	Check connection, termination and joints of cables are correctly executed.	✓	
7	Inspect cables for jacket damage.	✓	
8	Ensure that the correct size and type of crimping lugs have been used.	✓	
9	Check that the bending radius of cables is not less than the minimum established.	✓	
10	Cable markers to be installed before covering buried cables or cables in cable trays.	✓	
11	Tie wraps to be used for cable and wires fixation.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
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PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: P-030-SUB-ASP-1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
12	Trench markers to be checked w.r.t approved documents.	N/A	
13	Check cable glands for tightness and check the correct type of gland has been used for the size and type of installed cables.	✓	
14	Inspect cable laid in trenches, segregation and protection.	N/A	
15	Cables to be tested (continuity/insulation resistance).(*)	✓	
16	Equipment test report and inspection certificate to be-checked.	✓	
17	Check availability of vendor documents, including commissioning and start-up instructions. (If Any)	N/A	
18	Calibration test certificate of testing equipment to be checked.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
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SIGNATURE			
DATE			

PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

INSULATION TEST

EL-31 A

CABLE VOLTAGE LEVEL	D.C TEST VOLTAGE	MINIMUM INSULATION RESISTANCE (M.OHMS).
3.3kV	2500V	200
6.6kV & Above	5000V	200

TABLE [I]

NOTES:

Enppi

PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: P-030-SUB-UPDP-1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check cables are correctly fixed to trays and supports.	✓	
3	Check cables through walls or ceilings are correctly sealed.	✓	
4	Check that all cables are installed in accordance with cable lists and approved documents.	✓	
5	Check identification tags of all conductors and wires.	✓	
6	Check connection, termination and joints of cables are correctly executed.	✓	
7	Inspect cables for jacket damage.	✓	
8	Ensure that the correct size and type of crimping lugs have been used.	✓	
9	Check that the bending radius of cables is not less than the minimum established.	✓	
10	Cable markers to be installed before covering buried cables or cables in cable trays.	✓	
11	Tie wraps to be used for cable and wires fixation.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
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DATE			

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PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: P-030-SUB-UPDP-1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
12	Trench markers to be checked w.r.t approved documents.	N/A	
13	Check cable glands for tightness and check the correct type of gland has been used for the size and type of installed cables.	✓	
14	Inspect cable laid in trenches, segregation and protection.	N/A	
15	Cables to be tested (continuity/insulation resistance).(*)	✓	
16	Equipment test report and inspection certificate to be-checked.	✓	
17	Check availability of vendor documents, including commissioning and start-up instructions. (If Any)	N/A	
18	Calibration test certificate of testing equipment to be checked.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

	COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
	NAME		® Islam Sherif	
	SIGNATURE			
	DATE			

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PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

INSULATION TEST

EL-31 A

CABLE VOLTAGE LEVEL	D.C TEST VOLTAGE	MINIMUM INSULATION RESISTANCE (M.OHMS).
3.3kV	2500V	200
6.6kV & Above	5000V	200

TABLE [I]

NOTES:

Enppi

PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: P1-030-MOVDP-1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check cables are correctly fixed to trays and supports.	✓	
3	Check cables through walls or ceilings are correctly sealed.	✓	
4	Check that all cables are installed in accordance with cable lists and approved documents.	✓	
5	Check identification tags of all conductors and wires.	✓	
6	Check connection, termination and joints of cables are correctly executed.	✓	
7	Inspect cables for jacket damage.	✓	
8	Ensure that the correct size and type of crimping lugs have been used.	✓	
9	Check that the bending radius of cables is not less than the minimum established.	✓	
10	Cable markers to be installed before covering buried cables or cables in cable trays.	✓	
11	Tie wraps to be used for cable and wires fixation.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
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PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: P1-030-MOVDP-1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
12	Trench markers to be checked w.r.t approved documents.	N/A	
13	Check cable glands for tightness and check the correct type of gland has been used for the size and type of installed cables.	✓	
14	Inspect cable laid in trenches, segregation and protection.	N/A	
15	Cables to be tested (continuity/insulation resistance).(*)	✓	
16	Equipment test report and inspection certificate to be-checked.	✓	
17	Check availability of vendor documents, including commissioning and start-up instructions. (If Any)	N/A	
18	Calibration test certificate of testing equipment to be checked.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
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SIGNATURE			
DATE			

PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

INSULATION TEST

EL-31 A

CABLE VOLTAGE LEVEL	D.C TEST VOLTAGE	MINIMUM INSULATION RESISTANCE (M.OHMS).
3.3kV	2500V	200
6.6kV & Above	5000V	200

TABLE [I]

NOTES:

Enppi

PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: P2-030-MOVDP-1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check cables are correctly fixed to trays and supports.	✓	
3	Check cables through walls or ceilings are correctly sealed.	✓	
4	Check that all cables are installed in accordance with cable lists and approved documents.	✓	
5	Check identification tags of all conductors and wires.	✓	
6	Check connection, termination and joints of cables are correctly executed.	✓	
7	Inspect cables for jacket damage.	✓	
8	Ensure that the correct size and type of crimping lugs have been used.	✓	
9	Check that the bending radius of cables is not less than the minimum established.	✓	
10	Cable markers to be installed before covering buried cables or cables in cable trays.	✓	
11	Tie wraps to be used for cable and wires fixation.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME		® Islam Sherif	
SIGNATURE			
DATE			

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PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

PROJECT TITLE	: EDPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Power Distrbution Panels System	**SYSTEM ID**	: 030-EL-008
SUB-SYSTEM NAME	: Substation Power Distrbution Panels System	**SUB-SYSTEM ID**	: 030-EL-008
ITEM TAG No.	: P2-030-MOVDP-1	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
12	Trench markers to be checked w.r.t approved documents.	N/A	
13	Check cable glands for tightness and check the correct type of gland has been used for the size and type of installed cables.	✓	
14	Inspect cable laid in trenches, segregation and protection.	N/A	
15	Cables to be tested (continuity/insulation resistance).(*)	✓	
16	Equipment test report and inspection certificate to be-checked.	✓	
17	Check availability of vendor documents, including commissioning and start-up instructions. (If Any)	N/A	
18	Calibration test certificate of testing equipment to be checked.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
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SIGNATURE			
DATE			

Enppi

PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

INSULATION TEST

EL-31 A

CABLE VOLTAGE LEVEL	D.C TEST VOLTAGE	MINIMUM INSULATION RESISTANCE (M.OHMS).
3.3kV	2500V	200
6.6kV & Above	5000V	200

TABLE [I]

NOTES:

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

12.11- Electrical Supplier Check Lists & Reports

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

13- Electrical Commissioning

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

13.01- Electrical -Commissioning Check Lists

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

13.02- Electrical Supplier Check Lists & Reports

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

14- Red Marked-up Drawings

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

14.01- P&ID

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

14.02- Instrumentation Drawings

System ID	030-EL-008
System Description	Substation Power Distrbution Panels System

14.03- Electrical Drawings